

WHATEVER YOUR GOAL



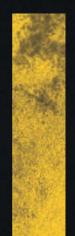
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"If you want to grow more you have to eat more."

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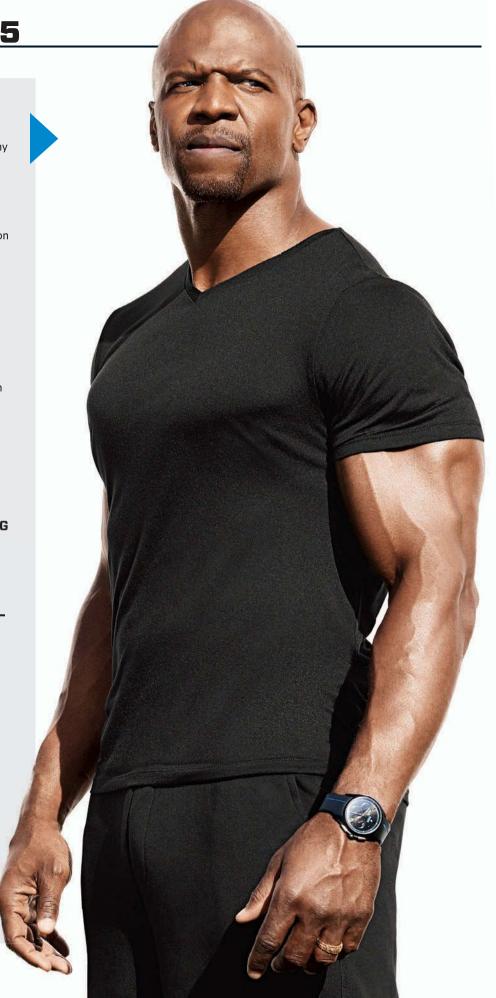
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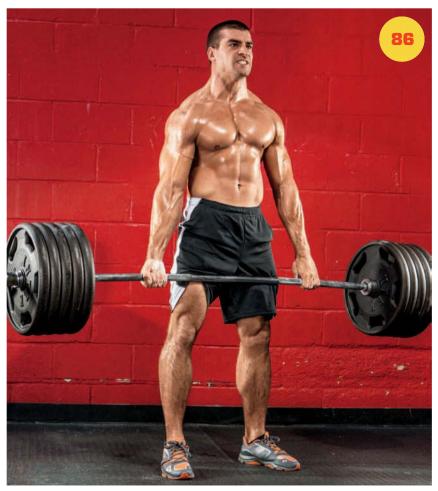
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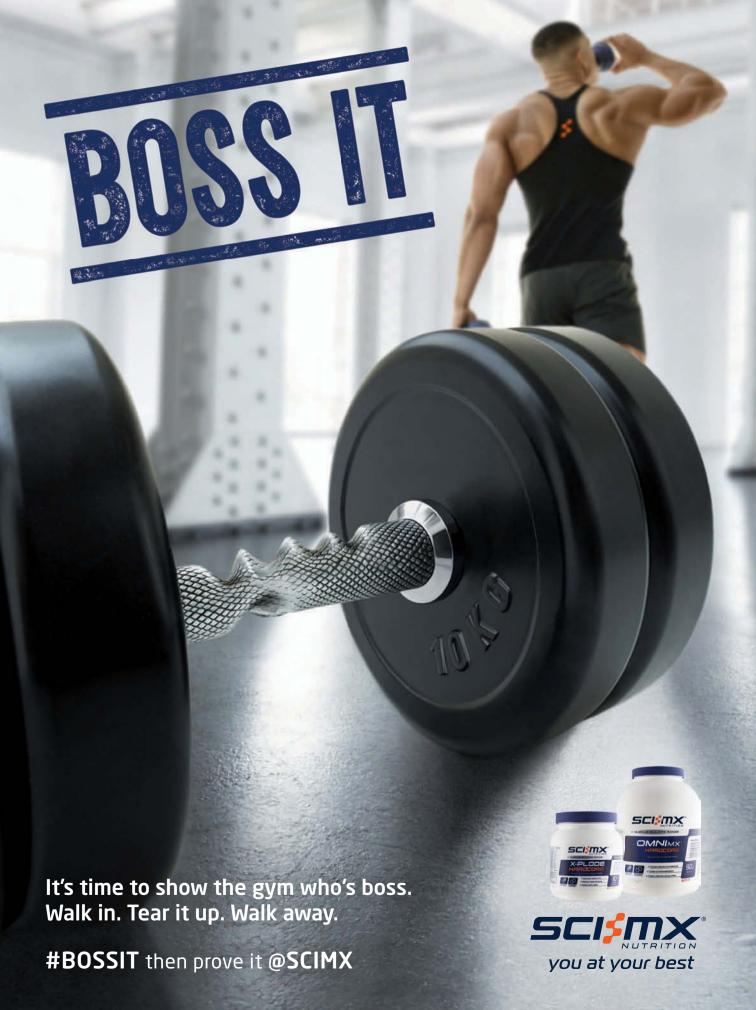
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SPRING CLEAN

Now's the time to focus on getting lean

April is my favourite month.
The days lengthen, summer beckons and everyone suddenly wants to look their best. We've got a great array of expert advice to ensure your physique improves along with the weather in the weeks ahead.

It doesn't matter how old you are. Cover star **Terry Crews** is 46 but you won't find many 23-year-olds in better shape.

It doesn't matter whether you prefer brief, high intensity approach or longer workouts with more sets and reps. Our feature *High Volume Attack* includes a programme that will leave every muscle aching and desperate to grow.

Training should be fun and varied and spring is a great time to mix things up. Just ask leading British fitness model **Kirk Miller**, who reveals how he temporarily forsook his ultra shredded look in favour of some brutal strongman training—and packed some extra mass on his frame.

Sport scientist **Ross Edgley** shows how Olympic lifting, traditionally the preserve of elite sportsmen and women, can be employed for aesthetics purposes.

I suspect we will see more women in gyms this spring than ever before and we have training and diet advice from three of the best in Britain this month—

Michelle Brannan, Emma Paveley and Rhiannon Pontin.

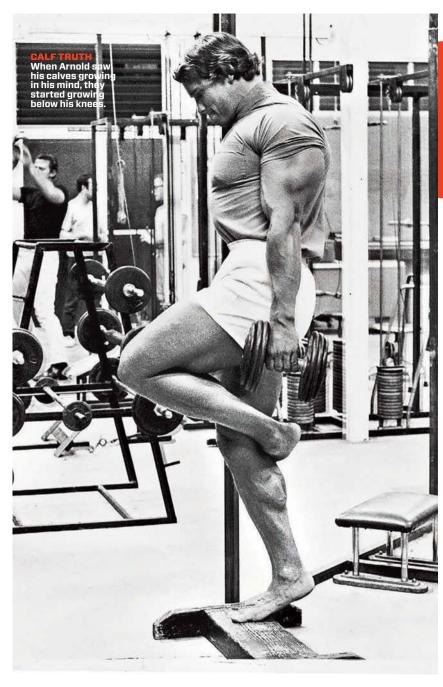
Enjoy the mag and enjoy your training. MAF

J Per

John Plummer Editorial Director







SEEIT THROUGH

How to set goals like a **TERMINATOR.**

How can I
make sure I
really achieve
my goals?

to setting goals and achieving them always begins with visualisation. You have to create a picture in your mind of what you want to achieve and imagine it's already true. Then it's almost easy to get there because you know what it is you want—it just takes time and work.

People fail to achieve goals because they can't really see themselves succeeding, so they don't believe they can, and then they quit at the first sign of adversity. Successful people don't quit because, in their minds, they've already won. It just isn't official yet.

I like to use the example of how I brought up my calves to illustrate this. When I finally acknowledged that they were a serious weak point, I began to visualise my calves all the time—I saw them growing and taking shape. This automatically led to me taking practical steps to make them grow. To help me concentrate even more, I cut the legs off my sweatpants so that I could see my calves whenever I trained. It didn't matter how puny they looked; I kept seeing them as champion-level calves. Ultimately, my calves grew and fulfilled my vision.

And that's the formula for success: create an image and let it lead you down a path that makes it real.

Yours in Iron,

Arnold Schwarzenegger



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EDGE IRON MAIDEN

M&F: Have you ever made history?

AD: I was able to represent Puerto Rico in the national team of in-line speed skating in Colombia, I was almost 15, wearing a uniform, representing my country. That's a moment that really made me proud. And I was the first Latina to get a cover of M&F Hers, so it just made it superspecial for me. I didn't have anybody to give me a chance. I had to look for the chance and then go get it myself. That's when doors open.

What's the hardest obstacle vou've overcome?

I passed through a moment when I was depressed-had all those setbacks and losses and funeral after funeral. You kind of lose yourself. That's when the fitness started again-I brought it back into my life. I started training again, and then I decided to do my first show. I wanted to be the best I could be. I wanted to prove myself wrong.

What inspires you?

My favourite movie is Cool Runnings. Every time I see that it gives me chills. Ever since I was a child, one of my dreams was either to become an Olympic athlete or to do ballet, acting, stuff like that-performing, things I can do with my body. It's been in my veins. I like things that make you feel happy. We have so much bad stuff happening around us. We need goals. We need things that bring people up, not bring them down.

What's it like sleeping with you?

I'm not a sleepwalker. I don't stand up at night and start walking around the house or anything like that, but I do work out while I sleep at night. Let's say if I'm really stressed out or I'm having a hard training week, you might catch me moving my feet as if I'm running. One time my husband caught me doing karate punches in the air while I was asleep. Another thing I've done ever since I was a child, if I'm sleeping with my face down, I curl my legs as if I'm doing leg curls.

What's your most embarrassing experience ever?

Once I had a really bad accident with speed skating. One of the guvs in front of me fell, and it's like a chain reaction. I just flew over the whole line of people, right onto my face. My two front teeth broke. I was dating my husband and was in the middle of my dentist appointmentsgetting my new porcelain teeth-so I had temporary ones, I was working in a store, and he came to have lunch with me, and as I'm biting my sandwich. I lifted my mouth away. and the two teeth were stuck in the sandwich!

What are you afraid of?

I guess you can say I live in constant fear, but that's the thing-I always try to push those limits. You gotta keep breaking those barriers and pushing through. And fear sometimes helps you to be sharp. I'm afraid of a lot of things; I'm a scaredy-cat. You put a cockroach or a spider next to me, and, man, you're gonna see me running away really fast!

You can post only one more Instagram pic. What is it?

I would post a portrait of myself happy or a picture of me with my family. Everything I do, I do it thinking about the people who love me. It's not about having millions of followers.

THE STATS

HEIGHT 5'4" Puerto Rico

35

122 lbs

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Get more pics on Instagram @anadfitness and follow her on Twitter @anadeliafitness and facebook.com/Anadeliadeiturrondo





HUGH JACKMAN CAN'T STOP DEADLIFTING

When another Oscars host can deadlift 400-plus for reps, maybe it won't seem so amazing. Until then, Hugh Jackman is the coolest star in Hollywood.

THERE ARE FEW stars with the crossover appeal of Hugh Jackmanwith both the classical training to play an understated role like Jean Valjean in Les Misérables and the physique to pull off the mutant rage of Wolverine. That's why you and your mum think he's cooljust for different reasons.

The last decade-plus of playing Wolverine has had an unintended side effect for Jackman, though, He is now a bona fide gym rat, as addicted to the iron as the typical M&F reader. A video he posted on Instagram in November showed the 46-vear-old actor deadlifting 405 for a set of five, with Jackman screaming at his spotters not to touch the bar as he ground out the last rep.

According to Jackman's trainer, David Kingsbury, who began working with Jackman before Les Misérables began filming, his client wasn't born with superhuman strength.

"Although he had performed deadlifts before, like a lot of people out there, he hadn't necessarily done them with consistency or with a focus on progression," Kingsbury says. "I placed an emphasis on them as a prime movement in our plan, each week using progressive overload to build his strength foundation. The domino effect of this was huge, helping to improve other lifts along the way."

Kingsbury says Jackman's success in the gym can be attributed to three main factors.

"First, he doesn't leave it to chance," Kingsbury says. "Most people think he trains hard for a role, but he trains



HUGE JACKED MAN Follow Hugh Jackman on Instagram: @thehughjackman

hard year round. Second, he isn't afraid of hard work, whether it is a 4 a.m. session or cutting weight for an important day of filming. Third, he has strong mental focus, and for a heavy deadlift, a lot of it is in the mind."



THE MOST **DANGEROUS FOOTRACE IN AMERICA**

You might just lose your mind before you finish.

MORE THAN 1.000 PEOPLE

have attempted the Barklev Marathons. Only 14 have ever completed it.

Even as far as bizarre ultramarathons go, the Barklev is an enigma. There is no set date, no website, and if you want to enter, you have to write an essay (or poem) explaining why you deserve to participate in this 60-hour, 100-mile footrace.

What makes the Barkley so dangerous? Runners have to climb more than 59.100 feet through the Cumberland Mountains of eastern



VISION QUEST It's not unusual for participants to break down and hallucinate during the race.

Tennessee-then descend the same distance. The total climb is equivalent to ascending Mount Everest twice from sea level. These general

guidelines remain in place from year to year, yet the race is different every time. There is no trail, and the map's not distributed until six hours before the race begins.

The idea for the marathon was born when founder Gary Cantrell discovered that a prisoner from Brushy Mountain State Penitentiary was able to cover only eight miles in 54 hours after escaping, "It's really well known in the circles of people who like to do insane things," Cantrell says. And the craziest thing he's seen? "There is no single craziest thing. Dan Baglione [an experienced ultra-runner], was out there for 32 hours and went only two miles on the course."

Think you have what it takes to be one of the few who have ever finished? First, you'll have to figure out when and where to submit your entry. And to do that, you'll have to find someone who's run it before. Yeah. Good luck with that.





BODYPOWER IS

The biggest names in fitness and bodybuilding are coming to Britain for **BodyPower**

Fitness models, bikini athletes, professional bodybuilders, fighters and strength sport champions are coming to Birmingham for Bodypower from May 15th to 17th.

British men's physique star Ryan Terry and his American counterpart, Steve Cook, are amongst those heading the line-up. For those who prefer the extreme look, Mr Olympia Phil Heath and runnerup Kai Greene will be present.

British weightlifting star Zoe Smith and nine-time World's Strongest Man finalist Terry Hollands will be adding even more muscle to the event and more big names are expected to be added to the line-up.

Visitors will get the chance to see their heroes up close in person as well as watching bodybuilding competitions, fitness model searches and strongman events and seeing demonstrations and exhibitions from industry experts and sports nutrition companies.

More than 60,000 people flocked to the West Midlands last year and event organisers are bracing themselves for an even bigger crowd for what will be the seventh vear of the expo.

Ollie Upton, marketing director at Bodypower, said: "We're estimating an increase to roughly 70.000 visitors and we've moved into bigger halls to give visitors the best experience.

"BodyPower will be bigger and better than ever and we're looking forward to seeing the crowds pack into the NEC for another actionpacked weekend." M&F





"And I thought I was

addicted

to my training"

Olly Foster, cover model and elite personal trainer



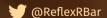
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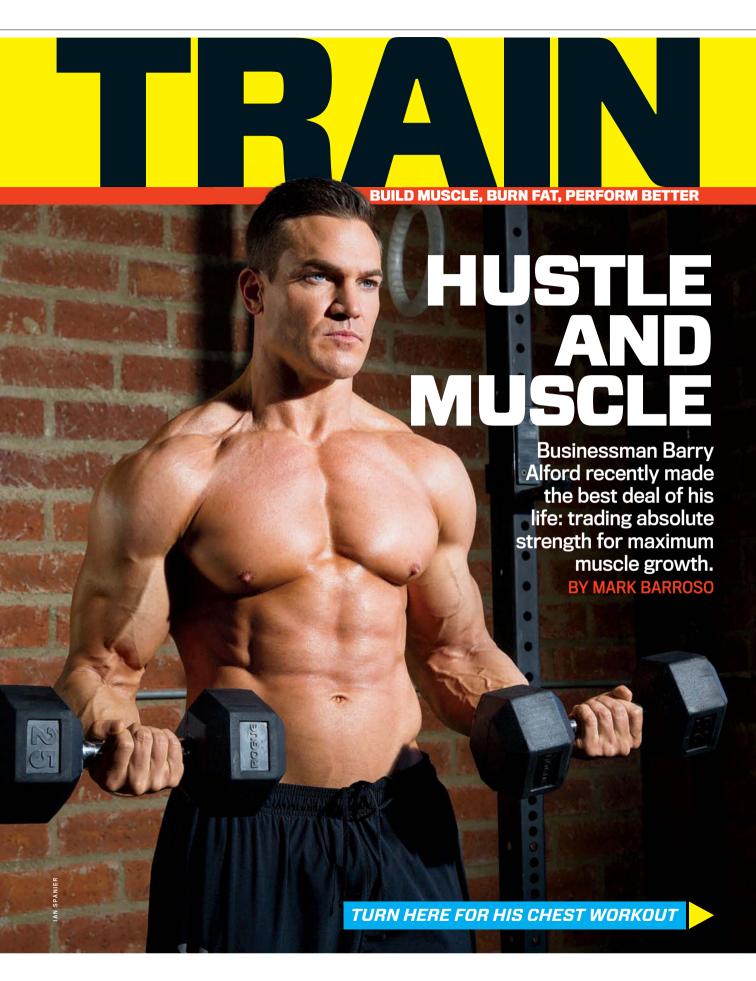
20g **10**g **1**g protein fibre sugar

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- 13.5g BCAAs per serving
- · No artificial colours or preservatives
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THE WORKOUT CHEST

Designed by IFBB pro Chris Cormier, this workout is done once per week.

EXERCISE	SETS	REPS
Incline Bench Press	4	15-20
Incline Hammer Press	4	15-20
Dumbbell Bench Press	4	12-15
Dumbbell Flye	4	12-15
Decline Hammer Press	4	15

"I started using time under tension [TUT] training with lighter loads, meaning each rep has an explosive

concentric movement with a negative that takes seven

to 15 seconds," Alford says. "It's been a game changer for me, and I'm very happy with how I feel." Taking more time with his reps has allowed Alford to get more work out of

his muscles using lighter loads, relieving his joints and keeping the stress of the lift squarely on his muscles for greater stimulation.

The 6-foot, 200-pounder trains five times a week. Alford cycles his carbohydrate intake, eating zero carbs for 2.5 days, and then loading up during the latter half of Day 3 with white rice and baked potatoes.

Although Alford may have a model's workout regime, he's actually a thriving entrepreneur, serving as the president of his own international fragrance company, Alford & Hoff—and no, it doesn't smell like sweat! "We all have our priorities and excuses," Alford says. "Make time for living a physically fit lifestyle."

SIZE
MATTERS
Alford's pecs
are bigger now
than when he
benched 455.

BARRY'S 3 TIPS FOR OVER-40 GUYS

1 REALLY RELEASE: Get massages. They help with recovery and relieve stress.

STAY FIT ON THE GO: Book hotels that have gyms, and search online for healthy restaurants.

LIGHTEN UP: Do basic exercises like bench presses and squats using lighter loads to avoid injury and to focus on the muscle.

AS A FREE SAFETY FOR Arizona State University Sun Devils, Barry Alford trained for performance, squatting 550 pounds, bench-pressing 455 pounds, and hitting 325-pound power cleans. But postgridiron, Alford kept lifting heavy into his 30s and eventually suffered a herniated disc in his back. At age 40 he joined Gold's Gym in Venice, California, and started training with IFBB pro Chris Cormier, a decision that changed his entire outlook on training and strength.





RAISE THE DEADLIFT

Standing on a raised surface to deadlift forces you to drop your hips lower and thereby recruit your quads more to begin the lift. This improves your speed off the floor on the conventional deadlift and can help you break a plateau.

BY SEAN HYSON

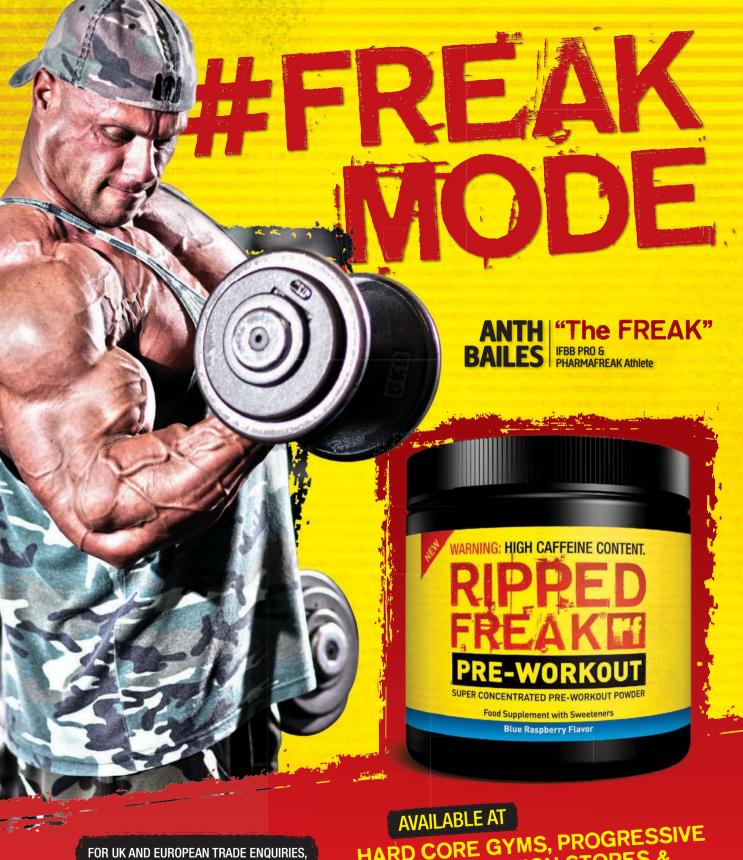
DEFICIT DEADLIFT

STAND ON A MAT OR PLATE

(as shown) that's one to two inches thick and prepare to deadlift as usual. Note that the bar remains on the floor and is not raised.

DROP YOUR HIPS
as you begin the pull.
You'll notice that the
elevation makes you get
lower in order to begin pulling
the bar effectively. Keep your
lower back flat as you stand
up to lock out.

CAUTION: The deficit deadlift can kill your back if you're not warmed up. Stretch your hips and hamstrings beforehand to improve your range of motion.



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QUICK TIPS A 12-pound hammer is ideal for most guys, and old truck and tractor tyres are the best striking surfaces.

KING OF SWING

Violently wielding a giant hammer isn't just a stress reliever but a valuable strength and conditioning tool, too. BY ROB ORLANDO

some of the strongest people I've ever met have never set foot in a gym. They are welders or farmers—day labourers who spend their entire lives moving large loads quickly and efficiently. It stands to reason, then, that swinging a sledgehammer with intensity is an effective way to increase conditioning. Even better, it's just a fun way to work out.

The interesting thing about sledgehammer strikes is that it's hard to quantify how much work someone has done. One hundred strikes for one guy may not provide as much work as it would for another, making total reps irrelevant, and placing all the emphasis on putting in an honest and intense effort.

THE PROGRESSION

1

SET-UP

Grab the top (close to the head) with your dominant hand and the bottom of the handle with your off hand. Stand about 12-18 inches away from the tyre with your feet a little wider than hip width. Rotate your feet slightly so that your nondominant side is closer to the tyre than your

2

WIND-UP

Bring the
hammer up and
over your
dominant
shoulder in one
continuous arc.
Extend your
hips, shoulders,
and torso so
that the sledge
is now
overhead.

3

HAMMER DOWN

Contract your abs and drive the head of the hammer into the tyre, sliding your dominant hand down the handle so that it meets your opposite hand, Control the rebound after each strike. Perform equal reps using your nondominant side.







Superb taste

New generation BCAA's with L-Glutamine



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BCAA powder with superior 8:1:1 anabolic ratio www.vplaboratory.com

SOYOU **THINK YOU CANDIP**

Upgrade your pressing power and the size of your arms by building proficiency with the hardest dip variation-the ring dip. BY NATE FORSTER

MASTERY OF THE DIP

-and all the physique and performance benefits that come along with it-is a by-product of repetition. To that end, most guys beat the standard (or weighted) dip to death, never giving the ring dip a shot. This is partly a matter of availability, as most gyms don't have gymnastics rings, and partly a matter of attitudes. (Who needs rings when you have parallel bars?)

The benefits of the ring dip. however, extend beyond novelty. Ring dips force you

into a much harder muscle contraction and recruit a wealth of stabilising muscles that aren't activated during a standard variation. Unlike a dip station, the rings will sway back and forth during every inch of the movement, forcing this contraction.

A staple in many CrossFit routines, ring dips work the triceps, shoulders, and chestjust like standard dips-but they also heavily tax your core and a host of auxiliary muscles that support a full, proper range of motion.

BECOME A MASTER FECT RING DIP

THE MOVE

The most important aspect of a successful ring dip is getting a full range of motion. In the bottom position, try to get your biceps to touch the tops of the rings. In the top position, make sure both arms are fully locked out and tight to your sides. Because the rings want to drift outwards, your pecs have to work harder to maintain an upright position here. Keep your core tight the whole time to avoid form deviations that could lead to injury.

THE WOD

Perform three rounds of 21-15-9 reps of:

Front-rack barbell lunges (135 pounds)

Ring dips

OR

Maxrepetition ring dips in 3 minutes



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FOOD SUPPLEM

SCORPION KING

Give your core strength— and metabolism—a boost no matter where you are with this metabolic circuit.

SCORPION

From a push-up position, twist your body to the left and reach your right foot behind you as far as you can. Try to tap the floor. Return and repeat on the opposite side.

WHAT IT IS

A brief but intense metabolic core and lower-body circuit designed by L.A.-based trainer Andy McDermott. You perform three to five rounds of the following four exercises: planks, scorpions (shown), walking lunges, and exaggerated jumping jacks (which mimic a "snow angel" motion). Its brevity, McDermott explains, is no reason to dismiss it. "Even five or 10 minutes of exercise is immeasurably better than none."

WHY IT WORKS

"This is a fantastic workout to get your core and big lowerbody muscles activated and to fire up your metabolism," McDermott says. "Many people think about training their abs but neglect taking care of their lower back, obliques, and hips. The core and lower-body muscles work together, so they should be trained together." What's more, since this workout requires no equipment and takes only five minutes, it can be done anywhere.

CORE AND LOWER-BODY CIRCUIT

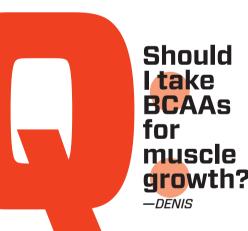
EXERCISE	REPS
Plank	30 seconds
Scorpion	20
Walking Lunge	10
Exaggerated Jumping Jack*	30

■ Perform 3-5 total rounds, resting as little as possible between exercises and between rounds.

*Perform jumping jacks with straight arms and straight legs; this will require a higher jump than with a normal jumping jack.

THE TRUTH **ABOUT** BCAAS

More isn't better with this muscle supplement. BY ADAM BORNSTEIN





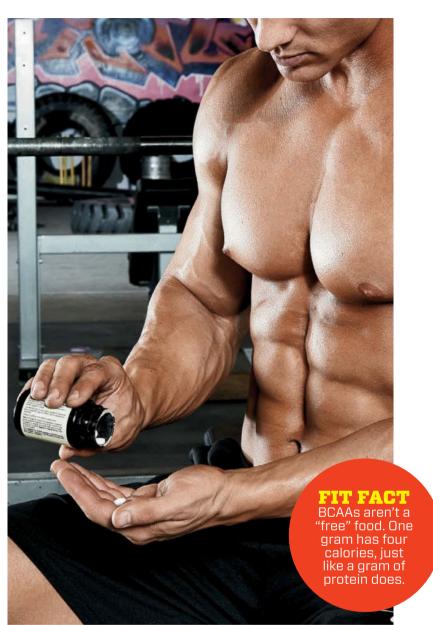
BRANCHED-CHAIN amino acids (BCAAs) have caught on as a supplement that allows you to train on an empty stomach without risking muscle loss. However, as with protein, taking more BCAAs doesn't necessarily lead to better results, and I think the megadosing some guys resort to is a mistake.

BCAAs consist of the amino acids leucine, isoleucine, and valine, usually in a 2:1:1 ratio. Leucine is the most important component, since by itself

it's known to be an "anabolic factor". signalling muscle-protein synthesis. A study in the journal Nutrition & Metabolism showed that when calories or protein are low, this signal can help prevent muscle-protein breakdown.

So while you absolutely should take in BCAAs (10 grams is a typical serving), especially during fasted exercise, your need depends on how much protein you eat overall. BCAAs are high in leucine, but so are all sources of complete protein. Whether you're chugging a protein shake or chomping on a steak, you're getting BCAAs, leucine included.

So here's my take: if you're struggling to eat protein because you're travelling or on a restrictive diet, BCAAs are a great option. But if you're already following a highprotein diet, don't pound BCAAs on top of it with the hope of getting an edge. Studies have shown that when compared with adequate protein, BCAAs offer no extra benefit. MEE





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POWER

You probably thought there's no way to be vegan and get enough protein to build muscle. You thought wrong.

BY CHELSEA TUTHILL

VEG OUT Spinach is a good source of niacin, or vitamin B3, which helps you convert fat and carbs into energy that fuels a workout.

THIS WAY TO EAT VEGAN AND BUILD MUSCLE

I'm considering going vegan, but I'm worried about my protein intake. How do I get enough protein on a vegan diet?



A VEGAN diet often lacks protein, and a high-protein diet is necessary to build muscle, so vour concern is understandable. However. Mike Mahler, a kettlebell expert and vegan for more than 20 years, is proof that you can maintain a high-protein vegan diet while increasing muscular size and strength.

"I feel great and still train very hard and make progress every year," says Mahler, who maintains a lean muscular physique year-round. "I don't have any aches and pains or any joint problems, and I recover from hard workouts very well. My mood is great every day, and I feel strong and ready to take charge of each day."

He does admit that eating enough protein can be hard, however. Legumes are a great source of protein but high in carbs, whereas eating nuts, also high in protein, can result in a high fat intake. One easy solution is to use vegan protein supplements, such as from brown rice or yellow peas. These powders are now available in most supplement stores and online.

Mahler relies on home-made protein bars of almond butter, flaxseed meal, vegan protein powder, and stevia. He recommends making your own trail mix with nuts and seeds mixed with goji berries and dark chocolate (70% cocoa) to take to the cinema, on hikes, or during long flights.

Shakes, of course, are an easy way to combine a lot of these ingredients, and Mahler provides one of his favourite recipes below.

VEGAN POWER SHAKE

SERVES 1

100 g frozen acai pulp

25 g baby spinach

70 g frozen blueberries

1 scoop pea protein

1 scoop rice protein

1 tbsp sacha inchi powder

1 tbsp chia seed powder

1tbsp raw cacao

1 tbsp pomegranate powder

1tbsp Udo's Oil

¼ tsp each ginger, cinnamon, and nutmeg

THE MACROS PER SERVING

562 CALORIES

37 g

51g





ORE MORE REP



MORE ENERGY, MORE INTENSITY, AND MORE POWER FROM START TO FINISH."







The mightiest grain you've never heard of has more protein-and flavour-than brown rice.

BY CHRIS GIBLIN

IF YOU'VE ALREADY TRIED

quinoa and couscous, don't think vou've sussed out the best alternatives to brown rice. Although still new to some, farro has actually had a long history of providing sustenance and nutrients to the masses: it was found in the tombs of Egyptian pharaohs and has been eaten by Italians from all walks of life for thousands of years.

Whole-grain farro has rice beat in a couple of key nutritional aspects. The two break down similarly in terms of calories and

carbohydrates (farro has a few more carbs and slightly fewer calories), but farro boasts more protein per cup (8 grams vs. 5) and more fibre than both brown rice (4) and quinoa (5). As with other whole grains, it's the carbs that provide your main source of fuel for exercise, but this grain also boasts antioxidants, which protect against cellular damage. Best of all, farro has a more robust taste and texture than other common whole grains resulting in quicker stomach satisfaction.

lengthwise and crosswise

Fine sea salt and freshly ground black pepper, to taste 350 g farro

- 1. In a large pot, heat the olive oil, then add the vegetables and season with salt and pepper. Stir. then cover: reduce heat to low and cook until the vegetables soften.
- 2. Add the farro and stir to coat with the oil and vegetables. Add enough water to cover the farro by about a ½ inch. Bring to a boil over high heat. Reduce heat to low and simmer until the farro is tender, about 30 minutes. Remove and discard the vegetables. Serve the farro warm.

PER SERVING

PROTEIN

50 g











When trimmed of fat, pork roast is as lean as chicken breast.

BARBECUE DRY-RUBBED SIRLOIN-TIP PORK ROAST

SERVES 6

1 tsp paprika 2 tsp chilli powder 1 tsp coriander powder 2 tsp garlic powder 1tsp onion powder ½ tsp cayenne pepper 1tsp black pepper 1tsp dry oregano 1tsp sea salt 2 tbsp brown sugar 1 sirloin-tip pork roast (900 g to 1.3 kg)

- 1. Preheat a BBQ grill to medium heat.
- 2. Combine all dry rub ingredients in a bowl.
- 3. Thoroughly cover the pork roast with the dry rub. 4. If possible, place the roast on an area of the BBO with indirect heat. Otherwise,
- place it in a roasting pan to prevent the bottom from burning. 5. Cover the BBQ and cook
- for 30 to 45 minutes, or until the roast reaches an internal temperature of 145°F/62.7°C. Allow the roast to rest for 10 minutes before slicing and serving.

EASY DOES IT

GOING LOW-CARB? Then you can't go wrong with this barbecued pork roast. Barbecue is often associated with thick sugary sauces, but this Southern-style dry rub is not only flavourful, it's nearly carb-free. Pair it with steamed or grilled veggies for a well-rounded low-carb feast. Yes, it's healthy, but it's also the easiest recipe I've ever written. Enjoy!

PER SERVING 157 CALORIES 30 g PROTEIN 5g CARBS

INDREW PURCELL

is a recipe writer and creator of *proteinpow.com*

CAKED IN PROTEIN

Treat yourself with these proteinpacked carrot cake bars **Bv Anna Sward**

THESE BARS ARE REALLY **SOFT, ALMONDY, AND** PERFECT IF WHAT YOU WANT IS A PROTEIN BAR THAT **FEELS AND TASTES LIKE A DESSERT.** They're also phenomenal pre-workout, packed as they are with protein, healthy fats and other

nutritious ingredients. You can shape them into bars and enjoy them raw, as I've done here, or take things a step further by coating them in melted dark chocolate for a more traditional protein bar. You could even roll them into truffles. The sky's the limit! M&F

RAW CARROT CAKE PROTEIN BARS

MAKES 2 SERVINGS

40 g grated carrots 40 g almond butter 30 g ground flaxseed or a ground flaxseed-based seed mix 30 g vanilla whey protein powder 17 g pea protein powder 10 ml water 1tsp toffee flavouring drops 1tsp cinnamon

- 1. Mix all ingredients together until you get a thick paste that you can mould with your hands into rectangles-or bars. If your mix is too sticky or watery, add a bit more of the flaxseed. You want to end up with a soft mouldable dough.
- 2. Shape your dough into two bars or, if you prefer, four small truffles.
- 3. Let them set in the fridge for an hour or two before wrapping in tin foil, or coating in melted dark chocolate.



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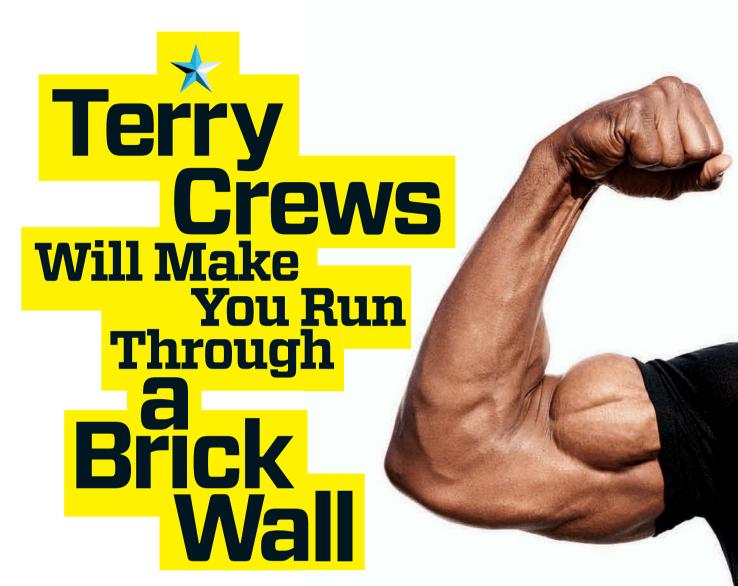
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The iron-pumping, pec-popping star of **BROOKLYN NINE-NINE** and three **EXPENDABLES** films, and new host of the U.S. version of WHO

WANTS TO BE A MILLIONAIRE

lives each day like it's his last, and wants you to do the same.

BY MATT TUTHILL /// PHOTOGRAPHS BY PETER YANG



ERRY CREWS CA

It's one of his first days on the set of Who Wants to Be a Millionaire, and he has just welcomed a new contestant, Josh. Crews is wide-eyed and laughing hysterically as he wraps both arms around Josh in an aggressive bear hug, screaming, "I love you!" at the top of his lungs.

Josh's adrenaline spikes; he's out of breath, red-faced, and mirrors the host's euphoria. He shakes as he laughs. The hundreds in attendance are laughing and smiling now.

The whole studio becomes an echo chamber of pure, unbridled joy, with Crews at the epicentre. It's a wild and chaotic scene—and borderline insane when you consider that amid all this sidesplitting laughter, not one funny thing has actually happened.

If you spend any amount of time in a room with Crews, though, you'll realise that the frenzy on *Millionaire* is typical of the kind of scene he creates wherever he goes. His lust for life can give anyone a contact high. You hear all the time about people with no "off" switch—but Crews gives new meaning to the term.

You probably know Crews' story—especially if you've been reading *M&F* for the past few

years—the unlikely rags-to-riches tale of an aspiring artist from Flint, Michigan, who skipped around the NFL for seven years before breaking into film, ultimately starring in three *Expendables* films and counting, conquering YouTube with the batshit craziness of his Old Spice ads, and now, entering daytime TV at the helm of a syndicated game show.

Hearing Crews speak about his journey from Flint to the red carpets of Hollywood is just as fascinating as hearing him talk about training and diet, which he does at length in this, his fourth *M&F* cover story—while offering an extra-strength dose of tough love for Internet haters.

A word of warning before you read on: you might want to put on your training gear first. By the time Crews is done motivating you, you're going to want to run through a brick wall, bench-press a house, or grab a stranger and shout, "I love you, man!"



M&F: When we post your cover on Facebook, there will be a ton of comments. The lion's share will be positive. But we can say with confidence that a good 10–15% of those comments will attempt to dismiss the body you've built and the work you've put in by making some combination of the following statements:

 Big deal. He's a genetic freak.
 He's paid to look that way and has a personal chef.

3) At his age, he must be on some kind of steroids or growth hormone.

It's always kind of sad for us to see those remarks. But how do you feel when you see stuff like that? And how would you address those points, starting with you're a genetic freak?

TERRY CREWS: Well, I think that it tends to be a cop out in a lot of ways. It's like looking at somebody who's rich and saying, "There he goes—he just got it." We all know, especially in America, that very few people are rich because it's inherited. Most rich,



The second thing people will say is that you're rich and you have a personal chef.

Hey, man, I've never had a chef. I promise you, I will get one as I keep moving on! I don't want to knock on it—I will get one. But the thing is, even if it is a chef, the people who are saying that won't answer this question: what are you putting in your mouth? Is that someone else's responsibility? I know a lot of people who have chefs who are not in shape.

Again, it's one of those things where if you have to put someone down in order to make yourself look better, it does not work. Life does not work that way. I see that with a lot of people. It's like, "If I knock this guy, then I'll look good," but people see through that in five minutes. It's just hatin'.

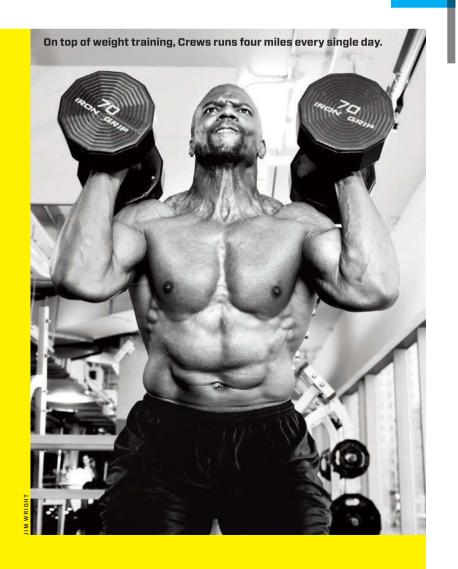
First of all, you are responsible for everything that happens to you in your life. Full stop. You are responsible for every iota of food that you put in your mouth. No one is forcing you into anything. No one is taking anything away from you—especially if you live in America. There are plenty of ways to eat. You could go to McDonald's and find a healthy choice. That's

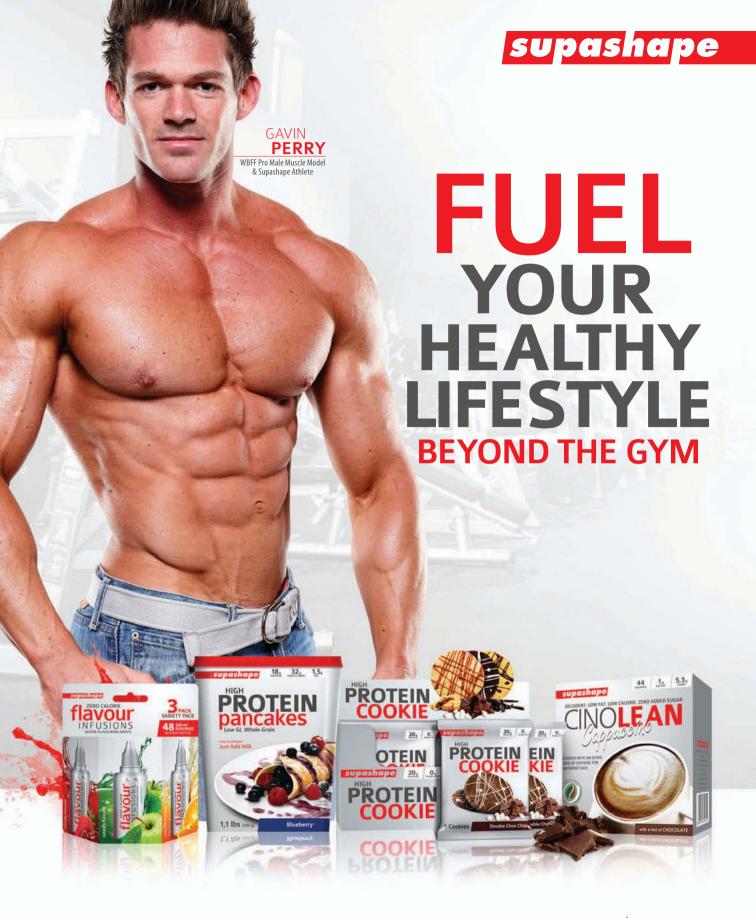
just the real deal. You can take the bread off and just eat the chicken breast, whatever you've got to do. There's always a choice. When you try to get rid of the fact that people have choices by saving things like, "Well, you've got this, and you've got that..." Hey man, I'm from Flint, Michigan. I promise, nobody has a chef in Flint, Michigan. You come up just like everybody. I had to figure it out. I made a lot of mistakes—a lot of diet mistakes. I tried to go vegetarian one time and got fatter, which was crazy; I didn't get enough protein. I've tried every diet. I've tried everything vou can do.

The third thing people will bring up is chemical enhancement. They'll say you're 46 years old, so you have to at least be using a topical testosterone cream or something like that.

Never. I love the fact that they think that because it's a badge of honour. If they really think I'm doing that, then that's the coolest thing. I am anti any drug. I love vitamins. And vitamin-wise, I've done my research and I've found natural ways to increase my testosterone.

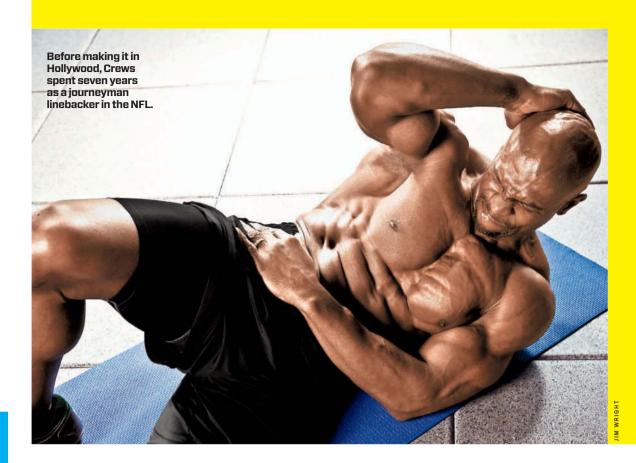
But I know a lot of people who like to cheat. Let me tell you something: I have been successful, have five kids, and been married 25 years—because you can't cheat. Cheating comes back to bite you. I'm not going to mention any names at all, but there are a lot of celebrities who have a lifestyle of cheating, and it comes back to bite you. I don't care who you are. Those little gaps in your morality come back to get you. You cannot cheat, and you cannot have a lifestyle of lying to people and stay successful because what happens is, especially nowadays, all that stuff comes out. There's no way to hide it. Somebody's going to name











names. "Hey, man, I sold him this yesterday." If anybody wants to put that on me, I dare you to bring me anybody who's ever sold me a steroid. Bring him out. Come on out. It's not going to happen because it didn't happen. It's never happened. In the day of Facebook and the day of Twitter, somebody's going to talk. Just like if I were cheating on my wife, somebody would say something. It's not rocket science. People catch you.

They can say whatever they want to say. It feels good. But at the same time, I expect that from people who have a mindset of finding excuses. If you want to find excuses, you'll always find one. But if you have a mindset of taking responsibility, there's nothing that will ever stop you.

You've brought up diet a few times. What is your diet like right now?

For me, the intermittent fasting thing has been a bit of a fountain of

youth. I would never recommend intermittent fasting for younger guys, to be honest. People in their 20s or early 30s, I think to some extent there's still growth to be made, and you haven't really matured yet. With me, I'm 46, this is Phase 2 of my life, and I've found that I didn't need that much food. I just didn't.

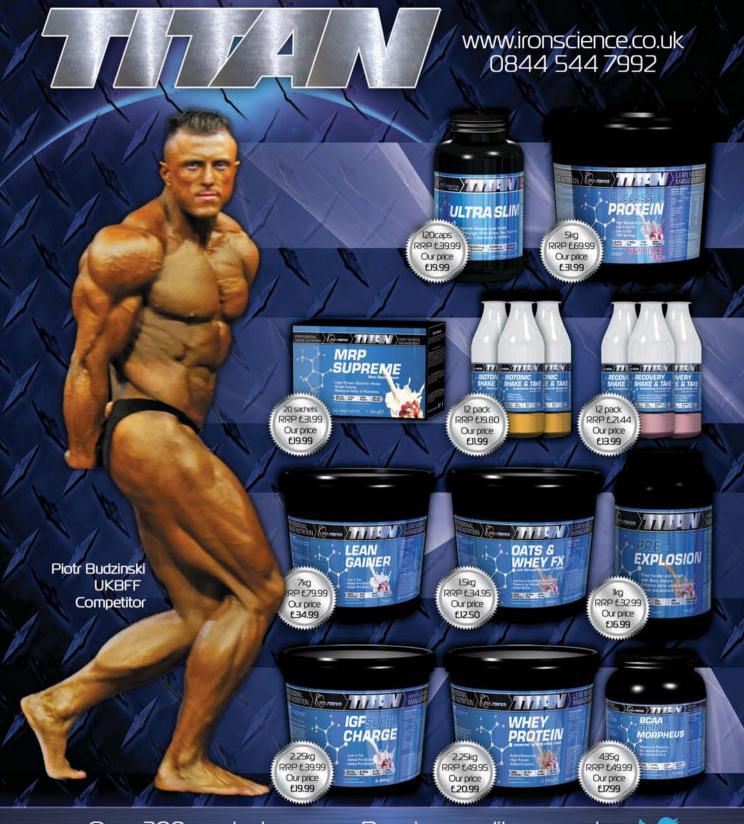
I've always been a guy who ate six or seven small, clean meals a day. That worked for me for a really long time. It got hard, though, because I would eat a lot, and I would work out, and I would feel bloated, and I was tired from eating, and then you feel funny when you're working out. It was just an endless cycle of, like, "Wow, something's gotta change."

I read a lot of books on intermittent fasting, and there's this thing called autophagy where, once your body has stopped digesting, it starts to work on your cell regeneration, and it just fascinated me. You know who actually turned me on to it was [Expendables co-star] Randy Couture. Randy blew my mind. He was like, "Hey, man. I'm doing this intermittent fasting thing." And I was like, "What? You're not eating breakfast? What is that?"

There are a few different ways to do IF. How do you structure it?

Every day, I eat in an eight-hour window. It starts at 2 p.m. and goes to 10 p.m. I eat clean, but I do have Ezekiel (sprouted grain) bread. My biggest meal is at 10 o'clock. I have a cheat day on Sunday. I eat whatever I want, but even then, I only eat in that window.

When I started this, all of a sudden my skin was clearer. I felt better; I actually had more energy. I was already in pretty good shape, but then I got in better shape, and I'm telling you this right now: at 46, I look much better than I did when I was 25, and that's scary. I think at least for the next 10, 15



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vears, I see this as my way to go. It's kept pounds off, and my workouts have been amazing.

Just this morning I was deadlifting 500 pounds. It's a struggle with vour brain, then your hormones will kick in and push you through. It's like your body says, "We get it. You need this, so we've got to give you what you need".

It's funny, if you listen to your body and if you do what your body is telling you to do, it's going to lead vou wrong. You have to tell vour body what to do, and all of a sudden your body gets in shape. You have to get in shape in your mind before vour body will get in shape. Things tend to happen spiritually before they happen physically.

The 500 you did this morning: how many reps did you get?

That was twice. But that took years to work up to. I'm sure I could try a 600-pound one-rep max, but if you blow your back out, it's not gonna be a good deal. You ain't doing nothing. The fact that I could do two, at 500 pounds, I say that's a good day.

Let me tell you, and this is the truth, man: everything you want in life takes white-hot desire. That's what a deadlift teaches you. It teaches you that you gotta want to lift that weight more than you want to live!

I watched Hugh Jackman-his video [that appeared online in November 2014] when he was doing his deadlifts, and they were going to touch it, and he yells at them, "DON'T TOUCH IT! DON'T TOUCH IT!" You can hear him scream it. Man, I jumped out of my seat and I cheered for him. He understands what it's about. He understands when you want something that bad, you're gonna get it. And your body has to give it to you. This is the way I live my life.

When I started doing Millionaire, you know, we did 175 episodes all while I'm doing Brooklyn Nine-Nine at the same time, and people were like, "How do you do it?" But the thing is, when you say, "I gotta do this," you've reached a point where the desire is so great, you want it more than anything. Decision followed by action is a magic formula that can change your life. It changed mine.

What made you want to do Who Wants to Be a Millionaire? A lot of people remember when it was big, but now when you mention it, the typical response is, "That's still on?" This is the thing: I have always gone against what everyone said you should be doing. I'm a big guy, so people say, "You should be doing

call up the Bond people. That's not what happens. They call you, and then you audition and they run vou through the gauntlet and vou've got to see. This, I've got control over. There's always a need for a host, for a personality. Some of the best times I've ever had were on talk shows. Just because I have muscle, that should never restrict me from being a personality. A lot of people feel that muscle and personality don't mix. They do. I break that perception. This opened me up to a whole new world. You can say whatever you want, but now I am a game-show host. Only a few people can host a game show, and I'm one of them. Right now, anything goes. I would never say, "Nah, I'm not doing that".

That's what a deadlift teaches you...You gotta want to lift that weight more than you want to live!

action movies." Well, I do comedy. Early on, I found that I was doing things for other people. Now I had a new opportunity. I've always wanted to do something like this, where it's my show and I'm the host. I wanted to do Millionaire because it opens up a whole other life for me. When you're talking about most actors, you wait until they pick you. You're waiting around, and then they say, "Oh, you're too old, and you're too this, and you're too that." You don't have any decision on that. If I want to be in a Bond film, it's not like you

People probably advised you against doing soap commercials too.

First of all, me and Old Spice, we changed what commercials were. You could actually watch commercials for entertainment now, and that was unheard of before. People watch the Old Spice commercials as if they're watching a TV show. People did say, "Why are you doing commercials?" Why? Because there are no rules. There are no rules—at all! You've got to throw out what you think somebody should be doing and think about what YOU

want to do. What is it that you want to do? What did vou ever dream about doing with your life? I was horseback riding about a week ago. I enjoyed it so much, and I was thinking about how many times when I was a kid I wanted to ride a horse; you see somebody riding a horse in a western or whatever. and I would talk about it. You know what was told to me by other guys in the neighbourhood? They were like, "Oh, man, vou'd look stupid riding a horse. You crazy. Don't do that. You grown up in the city, man. Get yourself that Cadillac and chill out. You'll get killed on a horse. That horse'll step on your head." And you hear all this stuff growing up, and finally you're like, "I ain't riding a horse".

But let me tell you something: when you challenge it, and when you get up on a horse and you're galloping-now I see why everybody loves it and enjoys it. I'm not listening to anybody else any more. I'm not listening to what their opinions are on what I should be doing any more. I'm doing what Terry Crews wants to do, and I think everybody has to live that way if you're going to find your true calling and your true life. Think for yourself. That's my biggest thing for everyone. Please, please think for yourself-and this goes for lifting, it goes for your diet, for everything.

I would never recommend everybody in the world do intermittent fasting—that's crazy!
Because it's not right for everybody.
But through study and searching,
I've found what works for me right now. In five years I might be back to eating seven meals a day.
I don't know. But I could do that because there are no rules, and I won't allow myself to be put in this thing where, "OK, this is the way it's gotta be, and these are the rules".

That's a mistake I see trainers make all the time. They're doing this kind of round-peg, square-hole thing. Well, guess what? You need to put a round peg in a round hole, and a square peg in a square hole. The only question you've got to ask yourself is, "Is it working?" Whatever you're doing, is it working?

I played with guys who were on steroids, and it ain't working for 'em now—and in a major way.

They have a lot of problems, a lot of issues. When you cheat, it works for a second, and then all of a sudden it's a mess. I'm gonna tell you right now: be healthy, think for yourself, but stay true to who you are. That's my mantra for life.

But the first time you tried to move outside the genres that directors and producers wanted you in, you must have got tons of pushback.

I slowly realised that people will laugh at you. The thing that gets you accepted by your peers is the same thing that gets you rejected by them. It's crazy. Because if you try to fit in, eventually that all backfires on you. It's when you do your own thing and they don't want you around that you become a star and they want you. It's so crazy. I call it like this: you get so nerdy that you become cool. It's like Bill Gates. You know what I mean? I'm sure Bill Gates didn't get anything for a while, and now he's the coolest man on Earth. It's even like Arnold. When he started, lifting was crazy and no one did it. Now he's become the coolest man on Earth.

So much of your success in the gym and in life stems from your positive attitude. Most people know they're supposed to have a positive attitude and can do it for a little while. Living that attitude on a moment-to-moment basis is a whole different



animal. How are you able to do that every day?

I heard this great quote from Ralph Waldo Emerson that sums up a lot of life for me: "God will not have his work made manifest by cowards." That sticks with me and haunts me daily. Am I scared to fail? Or scared to succeed? Am I willing to do everything it takes to make it? Or will I hide safely behind my excuses forever?



AIN LIKE

This workout begins with an explosive, total-body movement (the power clean), moves on to chest, and finishes with arms.

DIRECTIONS: Do the workout once a week, resting at least a day before and after any other upper-body training. Paired exercises (marked A and B) are done as a superset. Do one set of A. then one set of B before resting as needed. Repeat the pairing until all sets are done. Perform all other moves as straight sets.

THE WORKOUT TOTAL BODY			
EXERCISE	SETS	REPS	
1. Power Clean	4	10	
2 Incline Bench	4	12,10,9,8	
a. Machine Chest Press	4	20,12,8,4	
4A. Dumbbell Flye	4	10	
48. Dumbbell Curl	4	10	
EA. Dip	4	10	
BB. Push-up	4	20	

I discovered you don't even get to be born unless your mother has the courage to endure childbirth. Everything fantastic, amazing, or extraordinary takes courage. But here's another thing I discovered: you can't be a pessimist and courageous at the same time. In order to move forward, you have to believe that you are going to win. What you believe engages you with power that trumps everything in your life.

That works good and bad. If you believe you won't make it, there is no way you can. If you believe you will, you are unstoppable. I believe some people don't sustain their fitness goals because of a subconscious desire to fail. "What if I look too good? Will I stray from my family? What if I gain 20 pounds of muscle? Can I face the pressure of hearing I've changed? That I'm not the same old person I used to be?"

These are hard questions to ask yourself, and if you never ask them, then "you didn't want it" automatically becomes your answer.

I'm optimistic because at this level there is no other way to be. Any other mindset will take you down and out. One of the most successful men who ever walked on the face of the Earth, Andrew Carnegie, said this: "A wise man is the confirmed optimist." M&F



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GUIDE

Master the basics—fast—to get stronger and build heaps of new, lean muscle.

BY ERIC VELAZQUEZ /// PHOTOGRAPHS BY PER BERNAL

ere you to conduct an informal survey of well-muscled, experienced lifters about how they have been able to sustain their results, you'd receive a litany of often-conflicting responses. You'd hear about adding weight to the bar and reducing weight loads, manipulating macronutrients in the kitchen and keeping things consistent, cutting water and adding water, advanced techniques and back-to-basics approaches. If it sounds confusing, that's because it is. A survey of gym newbies yields much simpler data.

QUESTION: NHAT WORKS? ANSWER: EVERYTHING.

When you're new to the iron, your body is guick to show you just how adaptable it can be. Size comes fast, and gains in strength come faster, almost regardless of the programme you have chosen.

"Being a beginner at the gym is awesome," says Dan Trink, director of personal training operations at Peak Performance in New York City and author of the High-Intensity 300 workout manual. "Everything is new and exciting. You'll make great progress in a short amount of time. As long as you're not exceeding your experience or skill level, you will get the results you are looking for."

Put simply: training, of nearly any kind, is going to help beginners add muscle and burn fat.

With that knowledge in tow, where is the ideal place to begin? Some will swear allegiance to cardio-first routines, claiming that this helps you shed a few pounds and acclimatises you to the rigours of training. Those people are wrong.

Others will tell you that all roads to physique glory begin at the squat rack. Judges? This is not incorrect, but the barbell squat—and other such lifts that are considered foundational—require technical proficiency that can escape most new lifters, unnecessarily increasing the risk of injury.

"Just because anything will work does not mean you should just be doing any programme," Trink says. "In fact, choosing a solid programme that focuses on perfecting foundational movement patterns will help you long after you are out of the beginner stage."

Smarter training now, better results tomorrow. We enlisted Trink to deliver just that, giving you a programme that has everything you need to learn the basics of training, nutrition, and supplementation so you can start building the body you want today.

Welcome to the 2015 M&F Starter's Guide.

PATTERNED GROWTH

A great many routines—including those for beginners are built around the bench press, deadlift, and squat. Collectively known as the big three, these lifts are revered for their ability to recruit multiple muscle groups while allowing the lifter to move heavier loads. The myriad benefits of these lifts are not in dispute. But the complex nature of these movements can also be challenging for beginners who have not yet built the proper neural connections to perform them well.

Anyone who has been around the weights room for a while has seen their fair share of stomach-churning squats. Knees first, rounded backs, improper breathing, awkward bar placement, heels raising up off the floorthese are a few of our least favourite things. Likewise, new deadlifters and benchers are prone to a host of form deviations that might help them lift more weight today but are doing serious damage to their joints that could prove debilitating in their later years.

A better bet, Trink says, is to hardwire your brain and body for certain movement patterns that yield far greater results with the big three-and pretty much everything else-later on.

"While there is nothing magical about the particular exercises I've chosen, they do have you working in key planes of motion that will serve as the foundation of your programme for years to come," he says. "Horizontal pushing and pulling, vertical pushing and pulling, squatting and hip hingeing—all of which appear in this programme—represent a large number of the movement patterns that you will continue to work on every time you set foot in a gym."

In other words, early exposure to these movements translates to mastery of nearly every other movement you will tackle as you broaden your training horizons.

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These cardinal sins can stall gains, cause injury, or both.

GOING TOO HEAVY

Men have a tendency to train for the mirror; more plates definitely look more alpha than fewer plates. But going too heavy is far more likely to break down form and get you hurt than it is to get you swole. Stay the course and follow exactly what the programme calls for.

GOING TOO OFTEN

Three workouts per week are good, so four must be better, right? In our best Arnold voice, "Wrong". Your zeal, while admirable, can impair your body's ability to recover from workouts and prevent you from giving your best effort during your next training session.

NOT SLEEPING

Growth hormone peaks at night during sleep, and if you're not catching seven to nine hours of z's, you're probably low on GH. Latenight video games, TV, and Web surfing stimulate the brain and make it harder to get to sleep. So put down the gadgets and turn off the lights.

USING STRAPS

Until you're pulling twice your body weight on deadlifts, save your money and forget straps. As a beginner, you need to build grip strength that keeps pace with your lifts. Strapping up because you want to lift heavier now will ultimately hold back progress.

NOT DRINKING ENOUGH WATER

You cannot survive on Red Bull. You need water.
Dehydration of as little as 2% can have deleterious effects on strength, stamina, and even cognition.
We recommend drinking half your body weight in fluid ounces every day.



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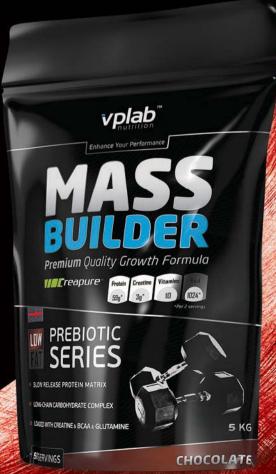
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BEGINNER-PLUS

Don't confuse *starter* with *remedial*. While this programme is tailored to fit true beginners—those with little to no previous training experience—nearly anyone can benefit from putting the parameters of this programme to use in the gym. That's why we don't call it a "Beginner's Guide". It's a Starter's Guide because it allows anyone—novice and advanced lifters alike—to simply start anew. You might not find any complex rep schemes or extreme techniques, but the key tactics we discuss here will definitely present challenges no matter where you're coming from.

The 2015 M&F Starter's Guide revolves around six key points, outlined here:

- **▶ 1) FREQUENCY.** Trink's programme includes three different training days that focus on basic movement patterns. "You'll tackle each one of the three workouts once per week for a total of six weeks," Trink says. Despite your enthusiasm or energy levels, resist the urge to enhance this schedule. Training more frequently than this can actually have adverse effects. See below.
- **PEST.** A tough concept for many guys to grasp is that change happens at home, long after your last set. You're not actually growing muscle during the workout; you're breaking it down. This makes rest a crucial component of change. A general recommendation for beginners is to train every other day (or three times per week), with the Monday-Wednesday-Friday schedule being a classic example. Whatever schedule you choose, just make sure to leave at least one day between workouts. This allows your muscles, joints, and nervous system to better recuperate for the next workout.
- # 3) INTENSITY. Intensity is a measure of exercise difficulty and can be influenced by total weight, rest periods, work duration, and more. Intensity boosters often used by lifters include techniques such as drop sets (reducing the weight after failure) and forced reps (having a partner help you complete more reps past failure). You've probably seen or may have tried many of these, but it's a mistake to jump right into using them here. Trink does advocate supersets, which calls for you to perform two exercises back-to-back with only minimal rest in between. This allows one muscle group to recover while another works, increasing workout efficiency while also slightly boosting intensity.
- **4) PROGRESSION.** Remembering the body's adaptability, you should steadily increase weight over time to keep it progressing. For you, this is especially important



and beneficial, because as your body builds new neural pathways for given exercises, you become more efficient at lifting heavier weight. This levels out eventually, and you'll have to get more creative, but taking advantage of your body's quick-gain strength system at the outset gives you a huge starting advantage.

"You are trying to increase the amount of weight you can use each week," Trink says. "For example, if you dumbbell goblet squat with 30 pounds the first week, try 35 pounds the second week. You may not always have the ability to increase, but that is your goal."

5) FAILURE. If you've ever stopped at 10 reps when you could have done 12 or 13 or 14, then you've short-changed your potential gains in size and strength.



2015 *M&F* STARTER'S WORKOUT

Perform each of these workouts once per week for six weeks.

THE SPLIT

DAY	ACTIVITY
1	WORKOUT 1
2	REST
3	WORKOUT 2
4	REST
5	WORKOUT 3
6	REST

TARTER'S GUIDE WORKOUT

7 REST



EXERCISE	SET	S REPS
Dumbbell Goblet Squat	3	10-12
SUPERSET WITH		
Lat Pulldown	3	10-12
Dumbbell Step-up	3	10-12
SUPERSET WITH		
Single-arm Dumbbell Ro	w 3	10-12
Standing Zottman Curl	3	10-12

STARTER'S GUIDE WORKOUT



EXERCISE	SETS	REPS
Kettlebell Romanian Deadlift	3	10-12
SUPERSET WITH		
Dumbbell Medium- incline Bench Press	3	10-12
Split Squat	3	10-12
SUPERSET WITH	((each side)
Half-kneeling Single-ar Kettlebell Overhead Pre		10-12
Triceps Rope Pressdov	vn 3	10-12

STARTER'S GUIDE WORKOUT



EXERCISE	SETS	REPS
Leg Press	3	10-12
SUPERSET WITH		
Cable Face-pull	3	10-12
Walking Lunge	3	10-12
SUPERSET WITH		
Single-arm Cable		
Chest Press	3	10-12
Standing Calf Raise	3	10-12

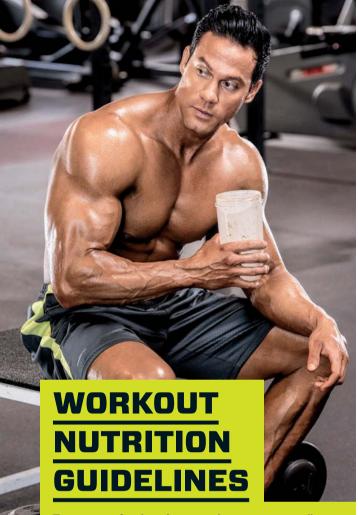
PROGRAMME NOTES:

- Rest no longer than 60 sec. between sets or exercises.
- Performing both exercises constitutes one superset. Do not move on to the next superset or exercise until you have performed three total supersets.
- For each exercise, choose a weight that allows for no more than 12 reps per set. Try to increase weight on each exercise from week to week.

We've written already about not trying to push your body too far, too fast, and going to failure would constitute going too far. Nevertheless, you need to at least approach failure if you want to make progress. Not getting close enough to your physical limitations can be just as ineffective as pushing yourself too far.

"You will notice that a rep range of 10 to 12 is prescribed," Trink says. "What this means is that you are shooting to get 12 reps where you could get only one more. That's called 'leaving one in the tank'. If you can get only 10 or 11 reps, that's fine. If you can't quite manage 10, then you went too heavy and need to back off the weight on the next set. And if you feel like you could have reached 15, you went too light."

★ 6) EXERCISE SELECTION. As Trink has pointed out, movement patterns are key. Many experts advocate preferential use of machines in order to train these patterns, but Trink doesn't necessarily agree. He recommends for a variety of moves using various forms of equipment. Constant tension-cable moves such as the lat pulldown appear with free-weight moves like the goblet squat. Single-arm exercises like the dumbbell row are paired with bilateral staples such as the Romanian deadlift. Stable moves like the leg press are bolstered with balance-challenged moves like the split squat. This dichotomy, Trink says, gives lifters the opportunity to benefit from a wide range of stimuli—and punch a one-way ticket to Swolesville.



Timing your food intake around your training will ensure the best use of that fuel.

PRE

Before workouts your body is in need of fastdigesting protein, such as whey, to get a jump on muscle repair and to limit the chance of muscle being used for fuel during exercise. Fasterdigesting sources of carbs are OK at this time as well; alucose will be put to use fairly auickly. And don't go too heavy on the fat. One hour before training, shoot for 20 to 40 grams of protein and 40 to 60 grams of fastand slowdigesting carbs in solid or liquid form.

INTRA

This optional window of eating during workouts (usually in liquid form) is a good idea for perennially skinny guys, "hardgainers" in gym parlance. If you're not a hardgainer, though, you can probably skip the intraworkout fuelling window. Going without food for the 60 to 90 minutes you're at the gym won't sink your goals. Besides, consuming a lot of easy-todown liquid calories can quickly take you past your daily requirements.

POST

Your greatest opportunity for growth takes place in the post-workout window. A mix of fast- (whey) and slow-digesting (casein) protein provides immediate and sustained amino acids for muscle repair. Fastdigesting carbs help by replacing glycogen (stored carbs within muscle tissue) and spiking insulin, which drives growth. Drink 40 to 60 grams of protein and 30 to 80 grams of fast carbs within 30 minutes of your last rep.

"NEW"TRITION: TRANSFORMATIONAL EATING

What you put in your body has a drastic impact on the way you look, feel, and lift.

With all the talk about how fast your body is likely to respond to your new training programme, it may be easy to downplay the importance of proper nutrition. But whether you're a beginner or an advanced lifter, your food intake will be the greatest determining factor in the degree of change you are able to achieve.

You may be recoiling already at the idea of complex meal plans, nutrient measurements, and detailed record-keeping. We won't discourage any of that, but since you're a beginner, it's more important to focus on the basics of eating for lean muscle.

The *M&F* Food Pyramid turns the old government guidelines on its head and offers a much more effective overview on eating for maximum muscle. Rather than some vague, arbitrary prescription, we provide guidelines that you can use to establish good, foundational eating habits before eventually customising them for your changing goals.

BE A MACRO MAN

While calories are certainly an important part of the *M&F* Food Pyramid, it is the quality of those calories that can make or break a physique. By eating your macronutrients—protein, carbs, and fat—in the right amounts, you can train harder, recover faster, and avoid unwanted fat gain.

PROTEIN. Protein is heavy in the M&F Pyramid. That's because this macronutrient provides the amino acids needed to repair and grow muscle tissue.

It also has the benefit of keeping you fuller for longer, which means you're less likely to rummage through the

biscuit tin.



A beginner can really benefit from increasing protein intake to at least one gram per pound of body weight per day.

CARBS. Carbs aren't the devil. In fact, they are your body's preferred source of fuel. So when, in a misguided panic, you decide to cut carbs in an effort to quickly shed weight, you are sacrificing the quality of your workouts and, through much more complicated channels, compromising your body's ability to create and hold on to muscle. Eaten to excess, carbs can create an unfavourable hormonal environment that makes you more prone to weight gain and other weight-related diseases. A healthier relationship with carbs entails eating (primarily) unprocessed sources from potatoes, sweet potatoes, rice, fruits, and vegetables.

> FAT. You've got to eat it to lose it. Seriously. Multiple studies have shown that consumption of healthy fats can actually lead to greater fat loss and improve protein synthesis (read: muscle building) while also protecting your heart and brain. Taking in 0.4 grams of fat per pound of body weight per day from healthy sources such as fish, olive oil, avocados, nuts, and seeds is essential for overall health and athletic performance.

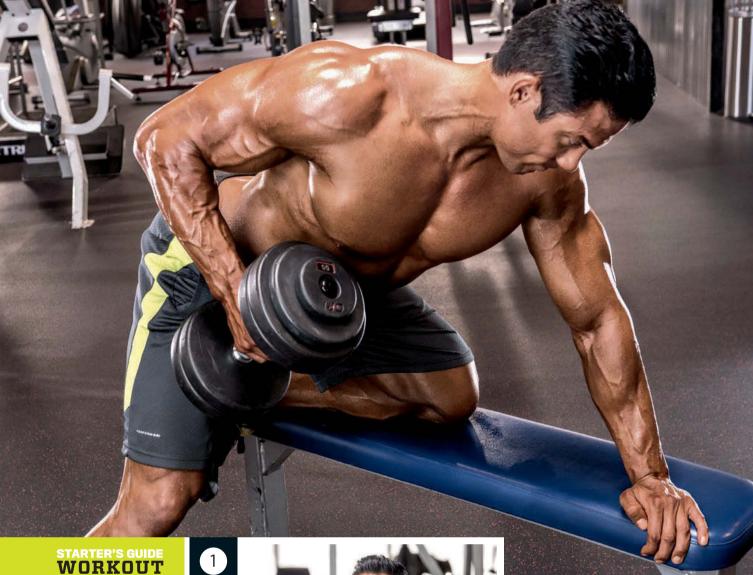
You should manipulate your consumption of these macronutrients to meet particular calorific targets based on your overall goals.

Those looking to gain muscle, for example, will need more calories and almost double the amount of carbs. Lower (not low) carb and calorie counts are standard for those more concerned with dropping weight or leaning out.

Use the table to the right as a starting point for your daily macronutrient breakdown and calorific requirements, then adjust up or down incrementally until you find what works best for you.







SINGLE-ARM DUMBBELL ROW

Use a bench to support your left knee and left hand. Hold a heavy dumbbell in your right arm and keep your back flat. Keep your elbow close to your body and drive it up to the ceiling, squeezing your back between your shoulder blades at the top of the movement. Bring the dumbbell slightly back towards your hip.

Moving the elbow away from the body and more in line with the shoulders will place a greater emphasis on the upper lats and middle back.



DUMBBELL GOBLET SQUAT

Hold a dumbbell vertically with the top of the dumbbell in line with your collarbones. Support the end in the palms of your hands with the fingers wrapped over the top. Try to maintain a vertical torso position throughout the entire movement and sit as low as possible. The knees should track in line with the toes. The toes can be turned out slightly or straight ahead.

The vertical body positioning emphasises the quads and deep transverse abdominis, which can help boost movement efficiency on barbell squats.

PERFECT BLEND

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You may start to wonder why you ever used another protein!







STANDING ZOTTMAN CURL $\triangle \nabla$



Curl up the weight with a palms-up, or supinated, grip. Pause briefly at the top, then turn your palms down

so that they are facing the floor. Lower with control and do not swing the weights up with your torso/hips. often ignored by beginners but that are vitally important in

developing pulling

strength.



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STARTER'S GUIDE WORKOUT



SPLIT SQUAT



Hold a pair of dumbbells and set one foot on a bench and step forwards with your other foot. Lower your back knee, getting it as close as you can to the floor.

Your front shin should remain vertical. Drive off your front foot to return to standing. Keep your chest up, arms fully extended, and stay balanced throughout.





HALF-KNEELING \(\triangle\) SINGLE-ARM **KETTLEBELL PRESS**

Start in a half-kneeling position with your left knee down on the floor, your right foot flat on the floor in front of you. Both knees should be bent at 90 degrees, and the right shin should be vertical. Take a kettlebell in your right hand and bring it to the rack position at your collarbone. Keep your wrist straight and the kettlebell resting on the top side of your forearm. Drive the kettlebell up and slightly back until your arm is straight. (Your biceps should be behind your ear at the top.) Repeat all reps for one side before switching legs and arms.

 Rather than grunting through barbell military presses, focus more deeply on the delts and the stabilisers required with this balance-focused move.





KETTLEBELL ROMANIAN DEADLIFT

Hold a pair of kettlebells in front of your waist. Keep your arms long as you drive your hips back as far as they will go. Do not think about lowering your chest to the floor but about driving your hips back. Your knees can be unlocked or slightly bent but should not bend as you lower. Once you can no

longer drive your hips back and can get lower only by rounding your lower back, that is the end of your range of motion. Reverse the motion to the starting point and squeeze your glutes as you reach the top position.

TIP

The RDL is a textbook hip hinge, which engages a multitude of muscles that come into play in standard deadlifts, kettlebell swings, good mornings, cleans,

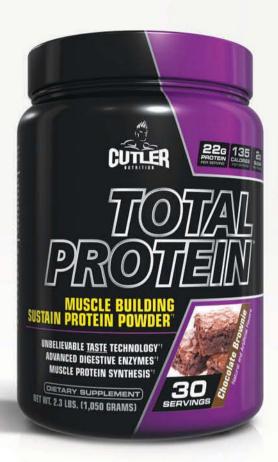
TRICEPS ROPE PRESSDOWN

Grasp a rope attachment at a high-pulley station. With your torso leaning slightly forwards and your elbows close to your sides, extend the ropes downwards forcefully, twisting your wrists outwards at the bottom. As you straighten your arms, stretch the rope so that your hands are outside your hips.

 The quest for bigger biceps often leaves guys with underdeveloped triceps. This constant-tension move allows you to move good weight through a comfortable, wristfriendly range of motion.



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TRAIN LIKE A PRO

STARTER'S GUIDE WORKOUT



CABLE FACE-PULL ▽

Sit on a bench and pull the rope to your ears with your upper arms parallel to the floor.

 Serving as a compound move for the undertrained rear delts, the face-pull helps give you more well-rounded shoulders when used regularly while also fortifying your joints against injury.

STANDING CALF RAISE

Keep your torso straight and aim for a big stretch at the bottom and a strong contraction at the top position.

 Don't start a new programme by skipping your calves at the end of your workout. These muscles are not only critical for most athletic activity but also vital for building a balanced physique.







WALKING LUNGE \wedge

Alternate legs and make sure your front shin is vertical and back knee is within one to two inches of the floor at the bottom position. Keep your torso vertical while keeping your arms straight. Bring your feet together between steps. Do not step through, as that is more of an advanced progression.

 Controlled walking lunges boost strength and stability in your whole body and, over time, can help reduce your risk of injury in sports.



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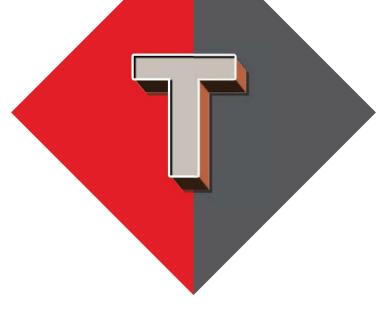
THE

METHOD



Brandon Lilly's revolutionary strength programme will have you setting new personal records in just 10 weeks. Are you ready to stop wasting time and get seriously strong?

BY ANTHONY YEUNG PROGRAMME BY BRANDON LILLY PHOTOGRAPHS BY EDGAR ARTIGA



TO BUILD STRENGTH AND SIZE, THERE IS NO

substitute for the big three: the back squat, the deadlift, and the bench press. Find a guy with a high three-lift total and it's just about guaranteed that he will look like a beast. But how to get there—and be that guy with the huge total—has always been up for debate. There are tons of great powerlifting programmes—the Westside Conjugate Method, 5/3/1, and block periodisation to name a few—but nothing quite like the Cube Method, a 10-week programme developed by Brandon Lilly, a world-renowned powerlifter and owner of a three-lift total in excess of 2,000 pounds.

Most other powerlifting programmes run each lift through the same level of intensity at the same time. For example, in Jim Wendler's 5/3/1 programme, the big three build to a max simultaneously. You follow that by a deload, or light week, then start again. The deloads are required because the central nervous system needs to recover before you reset for the next wave.

Lilly's Cube Method takes a major deviation from this formula and never has you lifting very heavy for more than one day in any week. For example, in Week 1 of the Cube Method, you'll squat heavy on Monday, perform lighter rep work for the bench on Wednesday, and perform explosive work for the deadlift on Friday. In Week 2, you'll still squat on Monday, but you'll do explosive work with lighter weight. Meanwhile, Wednesday's bench session is heavy, and Friday's deadlift workout is for reps.

"Each week, you have only one dedicated heavy day in excess of 85% of your max," Lilly explains. This keeps you fresh and prevents overuse injuries. And if you have a heavy squat workout in one week, the Cube automatically shifts you to an explosive squat workout—the lightest workout of all—in the next week to give you a deload without actually deloading. "It's a way to always keep the train moving forwards without having to slow down," Lilly says.

You'll also rotate through different exercise variations for the bench press and deadlift each week to correct weaknesses and help you blast through any sticking points. For the bench, you'll cycle through a floor press, board press, and full bench press; for the deadlift, you'll cycle through one-inch deficit pulls, two-inch block pulls, and four-inch block pulls.

Developing the Cube Method has allowed Lilly to amass his monster total at a relatively young age for a powerlifter.

"It's a way to develop maximum strength, focus on hypertrophy, and allow for maximum recovery," he says.

In addition to the three main lifting days, Lilly adds a fourth bodybuilding-style day each week to hammer weak links and, you know, actually look good on top of being brute strong. In total, you'll repeat the three-week wave (as shown) three times for a total of nine weeks, leading into the peak, the 10th and final week of the programme.

After you finish your main powerlifting move for the day, the remainder of your workout uses assistance lifts to isolate weak links and mimic the main lifts. For example, use skull crushers to improve your

THE CUBE METHOD
DERIVES ITS NAME FROM
THE ORIGINAL PROGRAMME
CHART THAT LILLY MAPPED
OUT. WHEN HE DREW LINES
TO CONNECT IDENTICAL
WORKOUTS, IT FORMED
A CUBE.

triceps strength on the bench press or use front squats to target your quads for the back squat. "If you just keep pounding heavier weights, you'll never get that isolation," Lilly says. He also advises that the accessory movements shouldn't be tremendously heavy. "Make accessory work, work for you," he says. "Keep the rep range between six and 12."

Finally, he urges to keep these keys in mind: never miss a rep, treat every workout equally, and the only personal records (PRs) that matter are the ones you set on your final and 10th week of each cycle. If you don't compete in powerlifting, create a mock meet.

But does the Cube Method really get results?





"I've got nine men who have run the Cube Method and have totalled 2,000 pounds or more," Lilly says. "I've got 11 girls who've hit more than 1,000 pounds."

Lilly says that with just one 10-week cycle, the average gains for a male are 36 pounds on the squat, 22 pounds on the bench, and 43 pounds on the deadlift. And while other powerlifting programmes have you chase PRs throughout the training cycle, the Cube Method has you focus on slow, steady gains so that you peak when it counts: meet day.

"My best piece of advice," Lilly advises firsttimers, "is to be honest with yourself, scale your numbers back a bit, and always chase technique over a number on the bar." The number will come.

EXAMPLE CUBE MAIN LIFTS

DOES NOT INCLUDE DAY 4 (SEE "ALL WEEKS DAY 4").

	MONDAY SQUAT	WEDNESDAY BENCH	FRIDAY DEADLIFT
Week 1	Heavy	Repetition	Explosive
Week 2	Explosive	Heavy	Repetition
Week 3	Repetition	Explosive	Heavy

THE CUBE METHOD WEEKLY BREAKDOWN

Heavy Day 1: 80% x 2 reps x 5 sets

Heavy Day 2: 85% x 2 reps x 3 sets

Heavy Day 3: 90% x1rep, 92.5% x1rep, 95% x1rep

Rep Day 1: 70% x 8 reps x 1 set

Rep Day 2: 80% x 6 reps x 1 set

Rep Day 3: 85% x 2 reps x 1 set

Explosive Day 1: 60% x 3 reps x 8 sets

Explosive Day 2: 65% x 2 reps x 6 sets

Explosive Day 3: 70% x 2 reps x 5 sets

CAN BE SUBBED IN ON ANY DAY

FOR THE SQUA	T AND DEADLIFT	FOR THE BENCH
Snatch-grip Deadlift Barbell Row Front Squat	Leg Curl Leg Press Good Morning	Close-grip Bench Skull Crusher Biceps Curl Upright Row

ENHANCED

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Product to be used with an exercise & training programme

Athlete: Dan Singh



UPRIGHT ROW

Pull a loaded barbell as high as you can, flaring your elbows out to the sides as you pull up.



EXAMPLE 3-WEEK WAVE WEEK 1

SQUAT: HEAVY	SETS	REPS	%
Squat	5	2	80
Good Morning	3	8	
Leg Press	3	20	
Walking Lunge	3	12	
Back Extension	1	60	
Leg Curl	2	50	

BENCH PRESS: REP	SETS	REPS	%
Incline Bench Press	1	8	70
Incline DB Press	s* 2	20	
Close-grip Bench Press	3	12	
Band Pec Flye	3	15	
Triceps Pressdown**	1	100	
Military Press	3	12	

^{*}Choose a weight that would cause you to fail at 23 reps.

DEADLIFT: EXPLOSIVE	SETS	REPS	%
Deadlift	8	3	60
4" Block Deadlift with Snatch Grip		12	50
Close-stance Squat	3	8	
Barbell Shrug	3	12	
Back Extension	1	50	
Lat Pulldown	4	15	

^{*}Blocks can be substituted with pins set to midshin in a power rack.

^{**}As many sets as needed.

EXAMPLE 3-WEEK WAVE WEEK 2

SQUAT: EXPLOSIVE	SETS	REPS	%
Squat	8	3	60
Reverse Band Squat*	1	2	80
Olympic Squat**	5	5	
Leg Press	4	15	
Reverse Hyperextension	. 3	12	
KB/DB Swing	3	15	

- *Hang a pair of bands from the top of a power rack, looping them around the ends of a loaded barbell. The bands will unload some of the weight in the bottom position of the lift, helping you accelerate out of the hole more quickly.
- **Stand with your feet shoulder-width apart or a bit narrower; squat as low as possible (below parallel) while staying upright.

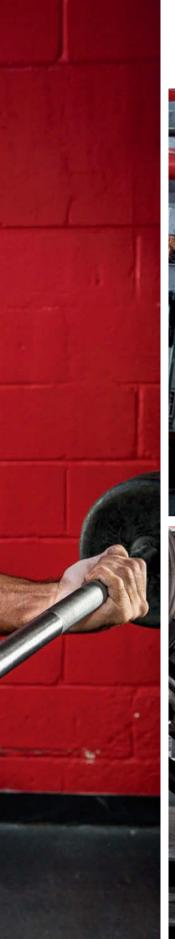
BENCH PRESS: HEAV	/Y SETS	REPS	%
Floor Press*	5	2	80
Bench	2	15	60-70
Lat Pulldown	3	12	
Band Pressdown	4	25	
DB Shrugs	3	15	
Military Press	3	12	

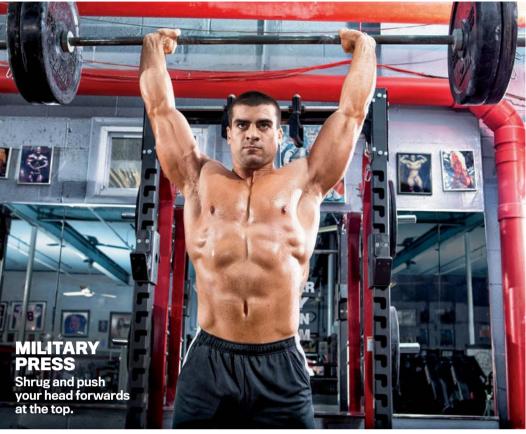
*Set the bar low to the floor on a power rack and lie underneath it. Take the bar out of the rack and lower it until your triceps, not your elbows, touch the floor. Pause and then press back up.

DEADLIFT: REP	SETS	REPS	%
Deadlift from 1" Deficit*	1	8	70
4" Block Pull**	2	3	80
Safety-bar Squat***	3	8	50
Glute-Ham Raise	4	10	
Back Raise	1	50	

- *Stand on a 45-pound plate and perform a standard deadlift.
- **Rest the plates of the bar on four-inchhigh wooden blocks so that the bar comes to just below your knees.
- ***Use a safety squat bar.









EXAMPLE 3-WEEK WAVE

SQUAT: REP	SETS	REPS	%
Squat	1	8	70
Wide-stance Squat	3	8	
Walking Lunge	3	15	
Narrow-stance Squat	1	50 -	135 lbs
Abs (exercise of your choice)*		60	
di A			

^{*}As many sets as needed.

BENCH PRESS: EXPLOSIVE	SETS	REPS	%
Floor Press (% based on max bench)	8	3	60
Incline DB Press*	3	15	
Band Pressdown**	1	100	
Standing DB Military Press	3	10	
Band Flye	3	15	
Aba			

Abs (exercise of your choice)** 50

DEADLIFT: HEAVY	SETS	REPS	%
Max Deadlift off Blocks*	5	2	80
Snatch-grip Deadlift	2	8	65
Dumbbell Row	3	10	
Dumbbell Shrug	2	20	
Up-and- down Plank**	1	50	

^{*}Set the bar on four-inch blocks or on the spotter bars of a power rack with the bars set to midshin level.

^{**}Hold the plank position for 10 seconds, rest for two seconds, and repeat for 50 reps. Do as many sets as needed.

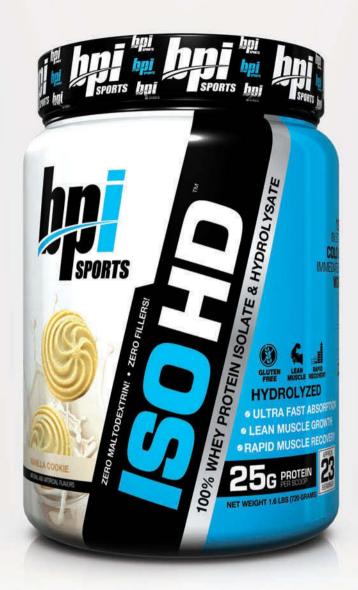


^{*}Choose a weight that would put you close to failure at 15 reps.

^{**}As many sets as needed.



KEEP IT 100%

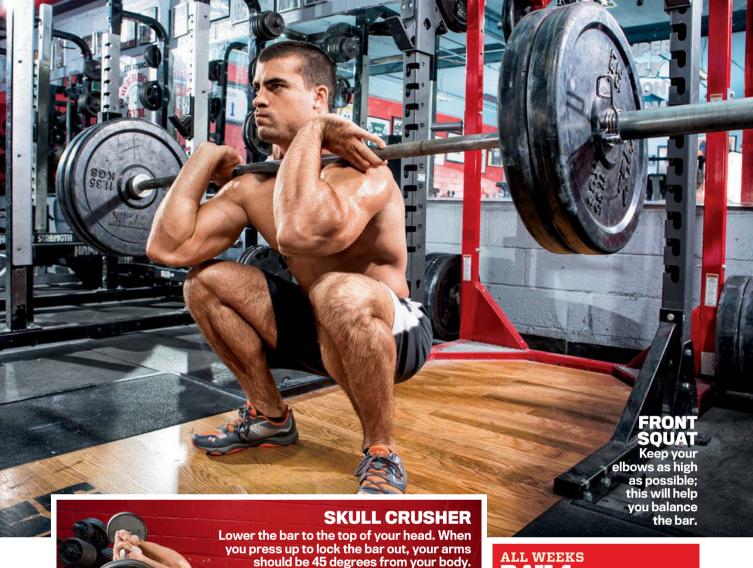


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ALL WEEKS DAY 4

DESIGN YOUR OWN BODYBUILDING WORKOUT.

LILLY SAYS: "This day is totally committed to bodybuilding. I always do three lifts before anything else. These lifts are the military press, biceps curl, and calf raise. Then I pick three to four body parts that need work, and I pick one exercise for each. So, on a given Day 4, you may have six to seven exercises, for a total of 18 to 35 sets depending on how you feel. Learn to trust your body. Weight is not important on this day—just go in and get the work done quickly. Thirty to 45 minutes is all you should need to complete the workout. Break a sweat, keep the rest periods brief, and if you like, do supersets, giant sets, or one big circuit." M&F

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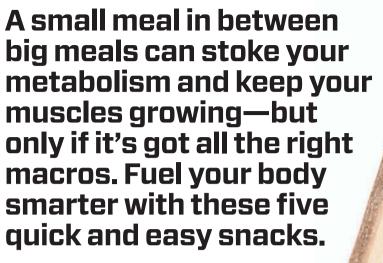






Attack. Attack





BY MATTHEW KADEY

PHOTOGRAPHS BY TRAVIS RATHBONE

TEX-MEX

Who says pinwheels are just for parties? This superfast version has it all: a good amount of protein, plenty of fat-fighting fibre (gracias, pinto beans), and a little kick from the pickled jalapeños to wake up your taste buds.

SERVES 4

115 g fat-free refried beans 4 (8-inch) wholemeal tortillas

115 g grated cheddar cheese

25 g pickled jalapeño, sliced

120 g baby spinach

1. Spread an even amount of the refried beans on each tortilla, leaving about ½ inch from the edge open. Sprinkle an even amount of the cheese and jalapeño over the beans. Top with spinach and roll tightly. 2. Slice into 1-inch pieces and spear each pinwheel with a toothpick to hold together.

PER SERVING		
309	15 g	
CALORIES	PROTEIN	
31 g	13 g	
CARBS	FAT	





FEAST NODE

Williams Falade, WBFF European Champion



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20 g PROTEIN

9g

2g SUGAR



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The Rules of Snacking

To make your snacks work harder for you when bridging the gap between meals, take heed of these guidelines.

KEEP IT LIGHT:

Remember, it's a snack, not a meal. So cap calories at about 350.

UP THE PROTEIN:

To keep muscle growth going in full force all day long, be sure your snacks contain some quality protein. Shoot for at least 8 grams.

EAT CLEAN:

Snacking is an opportunity to work towards your daily macros and get the right vitamins, minerals. and fibre into your diet. But this will happen only if you stick to whole foods and avoid the packaged crap that dumps unwanted calories and synthetic ingredients into your gut.

PLAY THE

CLOCK: To avoid packing on fat, most of your snacking calories should come midmorning and midafternoon. Try to limit late-night snacking to only items rich in protein, such as cottage cheese.

This manly version of a childhood favourite is a perfect way to sneak more whey protein into your diet. The fact that it takes about 10 seconds to prepare doesn't hurt, either.

SERVES 4

125 g almond butter or smooth peanut butter

40 g plain or vanilla whey protein powder

1 tbsp honey or pure maple syrup

½ tsp cinnamon

4 full celery sticks

30 g dried cranberries

1. In a bowl, stir together nut butter, protein powder, honey or maple syrup, and cinnamon.

2. Stuff the grooves of the celery with the nut-butter mixture and top with cranberries. Slice each celery stick into thirds.

PER SERVING

13 g CALORIES PROTEIN CARBS

17 g



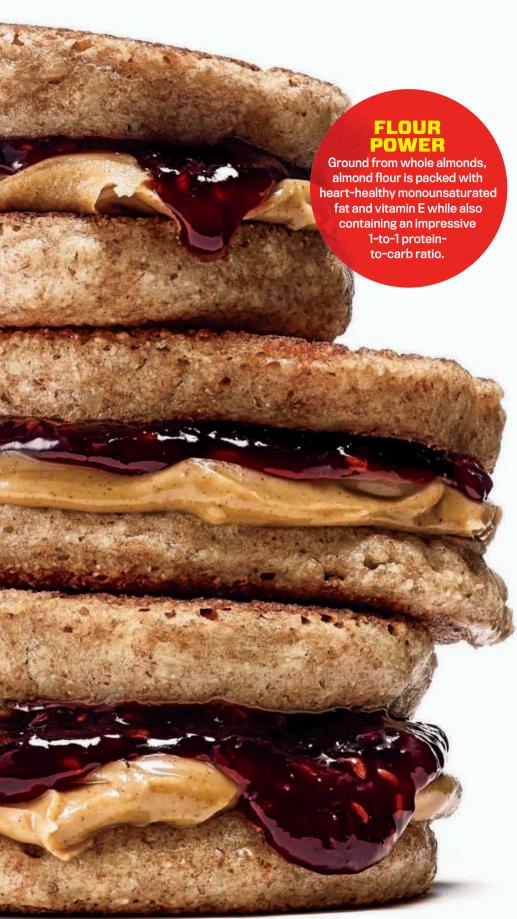
CHOCOLATE CHIP COOKIE DOUGH

PEANUT BUTTER PIE

21-22g Protein | Only 1g Net Carb | Under 220 Calories | Gluten Free

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PEANUT BUTTER AND JAM BLINI

It doesn't get much better than this twist on an old favourite. Blini are small pancakes that can be transformed into transportable mini nut-butterand-jam sandwiches for those times when you're feeling peckish. Also try stuffing them with a smear of cream cheese.

SERVES 5

of choice

60 g wholemeal flour or oat flour
60 g almond flour
½ tsp baking powder
½ tsp bicarbonate of soda
Salt
2 large eggs
120 ml plus 2 tbsp milk
1 tbsp oil or butter
65 g smooth peanut butter or almond butter
75 g low-sugar jam

- 1. Combine flours, baking powder, bicarbonate of soda, and a pinch of salt in a large bowl. In a separate bowl, gently beat eggs and stir in milk. Add wet ingredients to dry ingredients and stir until smooth. Let batter rest 10 minutes.
- 2. Heat oil in a frying pan over medium heat. By the tablespoonful, drop batter into pan and cook until edges begin to brown and bubbles form on the surface, about 2 minutes. Flip over and cook for 1 minute more, or until golden brown on the bottom. Repeat with remaining batter. You should have about 20 mini pancakes.
- **3.** Spread about 1 tsp each of nut butter and jam on 10 pancakes and top with remaining pancakes. Wrap each blini sandwich in a piece of foil for transport.

PER SERVING		
277	11 g	
CALORIES	PROTEIN	
22 g	17 g	
CARBS	FAT	



1tbsp yellow curry powder ½ tsp salt

14tsp black pepper

1. Preheat oven to 200°C/Gas mark 6. Pat the chickpeas dry with a paper towel or clean kitchen towel. You want the chickpeas to be as dry as possible so they get crispy. Remove any loose skins.

chickpeas out on a baking tray and bake until crisp and golden, about 40 minutes, stirring at least twice for even toasting. Allow them to cool, and store in an airtight container for up to 3 days. M&F

	1474	

194 9 g 9 g CALORIES PROTEIN CARBS

chemical that gives curry powder its yellow hue, has been shown to improve heart health by improving the function of the endothelium, the lining of blood vessels.

Only active ingredients

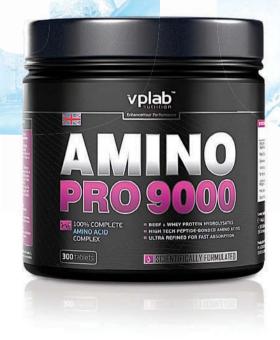
100% L-Glutamine

L-Glutamine is an amino acid which may have a powerful anabolic effect. It may help increase muscle strength and endurance, may help speed up recovery after exercise, promotes glycogen synthesis in muscles, and is the main source of energy for the immune system cells.

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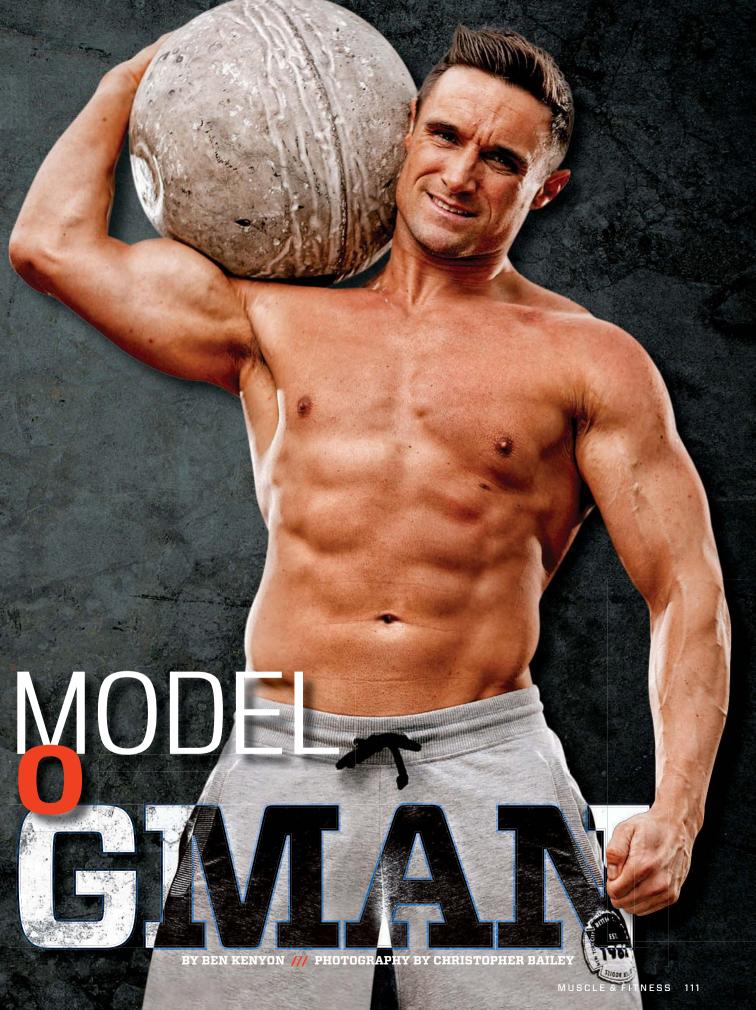














Most people would kill to have the shredded physique of cover model Kirk Miller.

His rock-hard six-pack has featured on the covers of numerous magazines but while thousands of men are pouring blood, sweat and tears to achieve his aesthetic look, the man known as "Abs" has taken his training in the opposite direction.

For three months he put his strict dieting and photo shoots on hold to train like a strongman, moulding muscles that were previously for show into weapons of strength and power.

Miller, one of the UK's most recognisable physique models, admits he was drawn to the challenge. "There's a lot of transformations going on these days with people going from fat to ripped and I just thought it would be something different for someone of my build who is renowned for being ripped all year to do something completely out my comfort zone."

Although his physique lost some of its sharp edges, Miller didn't put on too much excess weight and he experienced huge increases in strength and muscle. He believes others could also benefit from changing the emphasis of their training to strength, at least for a short period.

"This is very much about hypertrophy," he says. "People are set in stone about the ways they train. Yes, they might vary rep ranges but strongman and powerlifting are completely different and not something you would associate with someone of my build.

"The goal was to get as strong and as powerful as possible whilst increasing body weight a little.

"Over the last 18 months I have been trying to grow my physique. I have toyed with the idea of doing competitions in the new physique divisions but if I'm honest it doesn't really excite me. I get more of a kick out of training hard and this change of approach has really worked."

TRANSFORMATION EXPERT

Miller is no stranger to transformations. He quit his job as a plumber to become a fitness model after winning a cover model contest and his story featured in *Muscle&Fitness* in 2011.

He then spent four years perfecting his physique and staying in shape to traverse the globe for appearances and shoots and even trained one of Bollywood's top stars, Mahesh Babu, in India. This was another opportunity to try something different.

Anybody who has watched strength giants, such as Eddie Hall and Brian Shaw, on the World's Strongest Man knows strongman is one of the toughest sports.

Strength and conditioning coach Rich Levy devised Miller's 12-week programme, which was designed to prepare him for a strongman competition.

"I wanted to follow a proper periodised strength/power programme to actually see how much my strength and power could increase and how dramatically it would affect body fat and diet," says Miller.

"You do have to take it on the chin that your abs aren't going to be as sharp but the sheer strength gains I've had in 10-12 weeks have been absolutely ridiculous.

"Seeing the benefits that it's going to have on my physique once I am ripped up again—I think it will give me so much more fullness and thickness."

Miller was able to call on world deadlift champion **Benni Magnússon** and nine-time World's Strongest Man competitor **Terry Hollands** for advice.

Here he talks us through his devastating 12-week strongman plan, which saw him add 70 kg to his deadlift and nearly 50 kg to his squat personal bests. Try it—if only for a three-month period. You will love the extra size and strength.

WEEKS 1-4: OVERLOAD

Miller's 12-week monster strength plan is split into three four-week training blocks to ensure your body never adjusts to the training.

The first four weeks are about building as much muscle as possible and increasing strength by doing a lot of low-rep sets. This block adopts a standard four-day split with some core and strongman event training thrown in.

"During the first phase you have to keep especially strict with the rest

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periods for maximum hypertrophy," savs Miller.

"The key to those first four weeks is that whatever weight you do on the compound movements during the six sets you cannot drop down in weight."

So, if you start at 100 kg for the first set of six you can increase the load. But on the fourth set if you think you went a bit heavy it is tough luck, basically. You have working set. to push through and do it, no matter how long it takes. You rest-pause then go again and don't stop until you tick off every rep.

"Your brain will remember your last lift, so it is not only about increasing max strength and hypertrophy but also getting your brain trained for getting stronger," he says.

The first phase is about total load hence the need to complete every rep even if you have to rest-pause. "This phase forced me to get stronger and in turn got me to add more muscle," he says.

"It was horrible. It was a crash course in putting on strength and muscle, fast. The intensity was brutal—you have to

overload the muscle as much as possible."

WEEKS 1-4: HYPERTROPHY/ STRENGTH VOLUME

CHEST

Perform 4-5 warm-up sets on the following rep ranges up to first

10 reps @ 40%, 5-6 reps @ 60%, 3-4 reps @ 70%, 2 to 3 reps @ 80%

- A1) Incline barbell chest press (fat bar) 5 x 6-8 reps, Tempo 4:2:0, Rest 90 seconds
- **B1)** Incline dumbbell chest press 5 x 6-8 reps, Tempo 4:2:0, Rest 90 seconds
- C1) Standing cable flye 3 x 10-12 reps. Tempo 3:2:0, Rest 60 seconds
- **D1)** Seated machine chest press or flat dumbbell press 2 x 10-12 reps, Tempo 3:2:0, Rest 60 seconds

BICEPS

Perform 2-3 warm-up sets on the following rep ranges and approximate weights up to first working set weight.

10 reps @ 40%, 5-6 reps @ 60%, 3-4 reps @ 70%

- E1) Wide-grip standing EZ-bar curl (fat bar) 4 x 6 reps, Tempo 4:2:1, Rest 90 seconds
- F1) Seated incline dumbbell curl or Zottman curl 4 x 6-8 reps. Tempo 4:1:4. Rest 90 seconds
- G1) Seated machine curl or cable curl 2-3 x 10-12 reps, Tempo 2:2:0, Rest 60 seconds

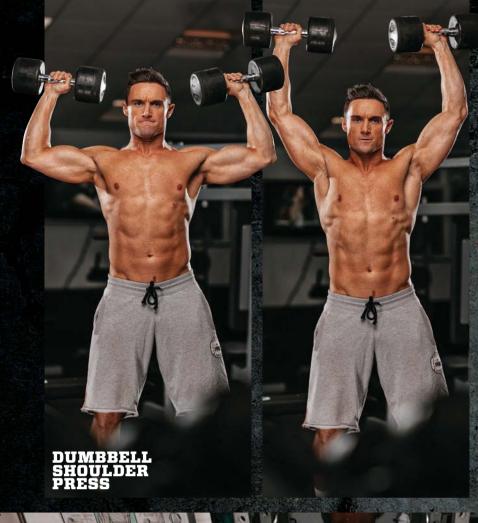
BACK

Perform 4-5 warm-up sets on the following rep ranges and approximate weights up to first working set weight. 10 reps @ 40%, 5-6 reps @ 60%, 3-4 reps @ 70%, 2 - 3 reps @ 80%

- A1) Deadlift 6 x 6 reps, Tempo 2:2:0, Rest 120 seconds
- **B1)** Wide-grip pull-up (overhand grip) 4 x 6-8 reps, Tempo 4:2:0, Rest 90 seconds
- C1) Seated row (parallel grip) 3 x 10-12 reps, Tempo 2:2:1, Rest 60 seconds
- **D1)** Reverse-grip lat pulldown 2-3 x 10-12 reps, Tempo 2:2:1, Rest 60 seconds







- **E1)** Close-grip bench press 4 x 6 reps, Tempo 4:2:1, Rest 120 seconds
- **F1)** Standing EZ-Bar extensions 3 x 6-8 reps, Tempo 4:1:1, Rest 90 seconds
- **G1)** Single-arm triceps pushdown 3 x 24 reps (do 8 reps each arm, then change and repeat each arm until 24 reps completed per arm—that equals 1 set), Tempo 2:2:0, Rest 60 seconds

SHOULDERS AND CALVES

SHOULDERS

Perform 4-5 warm-up sets on the following rep ranges and approximate weights up to first working set weight. 10 reps @ 40%, 5-6 reps @ 60%, 3-4 reps @ 70%, 2-3 reps @ 80%

- **A1)** Standing barbell or dumbbell shoulder press (no pushing from legs or core and glutes tight) 6 x 6 reps, Tempo 2:2:0, Rest 120 seconds
- **B1)** Standing cable reverse flye 4 x 6 reps, Tempo 4:2:1, Rest 90 seconds



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CELLUCOR







- **C1)** Leaning dumbbell side lateral raise 3 x 10-12 reps (each arm), Tempo 2:2:0, Rest 60 seconds
- **D1)** Single-arm bent over dumbbell reverse flye 3 x 10-12 reps, Tempo 2:2:0, Rest 60 seconds
- E1) Dumbbell shrug 3 x 10-12 reps, Tempo 2:2:1, Rest 60 seconds

CALVES

Perform 2 warm-up sets on the following rep ranges and approximate weights up to first working set weight. 10 reps @ 40%, 5-6 reps @ 60%

Superset

- E1) Standing calf raise (wide stance) 4 x 10 reps, Tempo 1:1:4, Rest 15 seconds then straight into
- **E2)** Standing calf raise (narrow stance) 4 x 10 reps, Tempo 2:2:0, Rest 60 seconds at end of each superset

Superset

- F1) Donkey calf raise 4 x 8 reps, Tempo 2:1:0. Hold under tension at the bottom of the rep for 10 seconds then power up. Rest 15 seconds then straight into
- F2) Donkey calf raise 4 x 12 reps, Tempo 1:1:0, Rest 60 seconds at end of each superset

Superset

- **G1)** Seated calf raise 4 x 20 reps, Tempo 2:2:0, Rest 15 seconds then straight into
- **G2)** Bodyweight calf raise 4 x 20 reps, Tempo 1:1:0, Rest 60 seconds at end of each superset

QUADS AND HAMSTRING

OUADS

Perform 4-5 warm-up sets on the following rep ranges and approximate weights up to first working set weight.

10 reps @ 40%, 5-6 reps @ 60%, 3-4 reps @ 70%, 2 - 3 reps @ 80%

- **A1)** Front squat 6 x 6 reps, Tempo 4:2:0, Rest 90 seconds
- **B1)** Back squat (partial rep from bottom, straight into a full rep) 4×8 reps, Tempo 2:2:0, Rest 90 seconds
- **C1)** Single-leg extensions 3 x 8 reps (each side), Tempo 4:2:1, Rest 60 seconds



D1) Elevated split squats off bench 3 x 10-12 reps (each side), Tempo 2:2:0, Rest 60 seconds

HAMSTRINGS

- **E1)** Romanian deadlift (lower just below knee, slight bend in knee) 4 x 8 reps, Tempo 4:2:1, Rest 90 seconds
- **F1)** Barbell glute bridge 4 x 8 reps, Tempo 2:2:0, Rest 60 seconds
- **G1)** Lying leg curl 6 x 18 reps (6/6/6 changing foot position every 6 reps), Tempo 2:2:0, Rest 60 seconds

STRONGMAN AND CORE MONTH 1

STRONGMAN

Perform a variety of light warm-up sets on upper body and lower body exercise to warm up, then move on to Yolk walk.

- **A1)** Yolk walk-technical practice 3 to 5 sets x 25 m walk using no more than 50% of competition weight, Rest 2 to 4 minutes
- **B1)** Atlas stones—technical practice 3 to 5 sets x 1 rep @ 70 to 80 kg, Rest 2 to 4 minutes

ABS/CORE

- **C1)** Front plank 60 seconds x 3 sets, Rest 60 seconds
- **D1)** Pallof press on cable machine 3 x 10 reps (each side),
 Tempo 2:2:0, Rest 45 seconds
- **E1)** Cable woodchop 3 x 5 reps (each side), Rest 45 seconds
- **F1)** Weighted knee crunch (with back support) 3 x 8-10 reps, Tempo 2:2:1, Rest 60 seconds MAP



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OLYMPIC LIFTING FOR AESTHETICS

SPORTS SCIENTIST **ROSS EDGLEY**EXPLAINS HOW CLEANS AND SNATCHES
CAN BUILD MUSCLE AS WELL AS STRENGTH

here was a time when
Olympic lifting was the
sole preserve of elite
weightlifters in countries
such as China, Bulgaria
and the old Soviet Union.

It was considered to be a highly specialised form of training for a select few elite athletes who trained for performance rather than aesthetics. But one look at the physique of current world and Olympic weightlifting champion Lü Xiaojun from China shows Olympic lifting has aesthetic benefits too. Larger muscle fibres, huge traps, impressive quads and low body fat are just a few of the advantages.

So let's look at the power clean, front squat, snatch and jerk and see how adding such moves to your routine could prepare you for the beach as well as the lifting mat.

Then try the workout devised by Team GB Weight Lifting performance director Tommy Yule that incorporates Olympic lifting into a conventional strength plan.

OLYMPIC LIFTING: THE BASICS

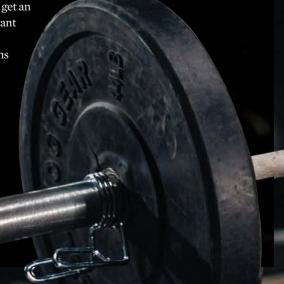
Weightlifting has a rich history. Britain's Edward Lawrence Levy won the first world championships in 1891 and the sport was contested at the first modern Olympics in 1896.

Olympic Games weightlifting today consists of two disciplines—the snatch and the clean and jerk. Each athlete gets three attempts at each lift and then the totals from both lifts are added to get an overall result. So how is this relevant to ordinary gym-goers?

Human skeletal muscle contains two key types of muscle fibres type I and type II. Type I fibres are more commonly known as slow twitch and are used in endurance training.

They have a much slower contractile speed and a smaller cross-sectional area, which means they're resistant to fatigue but not so good for building muscle.

Type II fibres are more commonly known as fast twitch fibres. They have a faster contractile speed and a larger cross-sectional area. They generate power so you want lots of them for lifting heavy in the gym. Also, their larger cross-sectional size helps you look more





impressive. So how do you develop them? The simple answer is by Olympic lifting.

Research at the University of Memphis, Tennessee, showed that when competitive lifters were compared, those typically utilising the heaviest loads (90% of their one-rep max or higher)—that is weight-lifters and powerlifters—exhibited a preferential hypertrophy of type II fibres when compared with bodybuilders. This data suggests that maximal hypertrophy occurs with loads from 80-95% of one-rep max.

Granted, bodybuilders are the foremost experts in muscle growth (hypertrophy) and the same study did state that bodybuilders experienced hypertrophy "equally in both type I and type II fibres", but this does raise the interesting point that if you want to increase the size and strength of your muscles by targeting the larger type II muscle fibres, Olympic-style lifting would work well as an integral part of your programme.

That's not to say you should ditch conventional forms of hypertrophy training and concentrate solely on your snatches and cleans. But it would make sense to drill the techniques and incorporate the moves once or twice a week.

ANABOLIC BOOST

The next important component of Olympic-style lifting to consider is the anabolic hormonal response. Scientists from the Department of Sport and Exercise Science at the University of Auckland, New Zealand, set out to analyse this.

In a study into competitive weightlifting they stated that during snatch and clean and jerk, elite lifters "have achieved some of the highest absolute and relative peak power outputs reported in the literature".

This, in turn, produces similar spikes in testosterone and growth hormone that are experienced during heavy compound bodybuilding-type training. Researchers from the Institute of Biomedical Engineering at Imperial College London also reported a direct correlation between spikes in anabolic hormones and one-rep-max lifts in Olympic lifters.







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YULE'S RULES

I am a keen practitioner of Olympic-style lifting but few men know more about it than Tommy Yule, GB Weight Lifting's performance director and British Athletics' former head of strength and conditioning, who has put together the following Olympic lifting routine for aesthetics.

Tommy says the routine is devised to complement rather than replace traditional bodybuilding movements.

It is based on the principle that all movements have a kinetic chain. Dr Arthur Steindler—one of the early pioneers of this theory—defines this as "a combination of several successively arranged joints constituting a complex motor unit"—in other words, how all your joints and movements work together during a squat, bench or deadlift.

Olympic lifting highlights any weak links in the kinetic chain. You might be able to grind out a deadlift or squat but not a snatch because all the joints and muscles must be firing at their optimal level to complete the move.

Olympic lifting with sub-maximal weights is also believed to prepare the body with neural recruitment/activation before big lifts like deadlifts. The high level of motor recruitment needed for an Olympic lift preps the body to then lift big during a deadlift or squat. What follows, therefore, is designed to generate better results than a traditional hypertrophy programme.

MONDAY SQUAT CLEAN AND LEGS

SQUAT CLEAN

4 sets of 8 reps with submaximal weight (65% of your 1 rep max)

Emphasis on speed, kinetic flow and motor recruitment prepares the body for subsequent lifts

FRONT SQUAT

5 sets of 5 reps (80% of your 1 rep max)

Emphasis on strength and quality of movement, maintaining the same form of efficiency you achieved during the squat clean

LUNGE

4 sets of 20 reps (60% of your 1 rep max)

Emphasis on form, hypertrophy and volume

CALF RAISE

5 sets of 10 reps (70% of your 1 rep max)

Emphasis on form and hypertrophy

TUESDAY

ARMS AND ABS

SEATED/STANDING

BARBELL CURL

5 sets of 10 reps (70% of your 1 rep max)

Emphasis on form and hypertrophy. Following a large compound day it's wise to periodise your training with a smaller, lower volume, isolation day. Abs and arms are perfect for this.

HAMMER CURL

5 sets of 10 reps (70% of your 1 rep max)

Emphasis on form and hypertrophy

WEIGHTED TRICEPS DIP

5 sets of 5 reps (80% of your 1 rep max)

Emphasis on strength and quality of movement

PALLOF HOLD

3 sets of 1-minute holds each side (banded or on a cable machine)

Emphasis on form and core engagement.

WEIGHTED LEG RAISE

(MEDICINE BALL)

5 sets of 10 reps (70% of your 1 rep max)

Emphasis on form and core engagement

WEDNESDAY

It is important to rest prior to the large, heavy, complex movements that are to follow.

THURSDAY

CLEAN AND PRESS AND SHOULDERS

CLEAN AND PRESS

4 sets of 8 reps with submaximal weight (65% of your 1 rep max)

Emphasis on speed, kinetic flow and motor recruitment that prepares the body for subsequent lifts

SEATED SHOULDER PRESS

5 sets of 5 reps (80% of your 1 rep max)

Emphasis on strength and quality of movement, maintaining the same form of efficiency you achieved during the clean and press

SIDE DELT LATERAL RAISE

5 sets of 10 reps (70% of your 1 rep max)

Emphasis on form and hypertrophy

FRONT DELT RAISE

5 sets of 10 reps (70% of your 1 rep max)

Emphasis on form and hypertrophy

SNATCH AND BACK

SNATCH

4 sets of 8 reps with submaximal weight (65% of your 1 rep max)

Emphasis on speed, kinetic flow and motor recruitment that prepares the body for subsequent lifts

DEADLIFT

5 sets of 3 reps (85-90% of your 1 rep max)

Emphasis on strength and quality of movement, maintaining the same form of efficiency you achieved during the snatch

WEIGHTED PULL-UP

5 sets of 5 reps (80% of your 1 rep max)

Emphasis on strength and quality of movement, maintaining the same form of efficiency you achieved during the snatch and deadlift

BENTOVER ROW (SINGLES)

5 Sets of 10 reps (70% of your 1 rep max)

Emphasis on form and hypertrophy

SATURDAY

CHEST AND TRICEPS

BENCH PRESS

5 sets of 5 reps (80% of your 1 rep max)

Emphasis on strength and quality of movement, maintaining the same form of efficiency you developed in the week

DUMBBELL FLYE

5 sets of 10 reps (70% of your 1 rep max)

Emphasis on form and hypertrophy

CLOSE-GRIP BENCH PRESS

5sets of 10 reps (70% of your 1 rep max)

Emphasis on form and hypertrophy

TRICEPS PUSHDOWN

10 setsof 10 reps (65% of your 1 rep max)

Emphasis on form, hypertrophy and volume

SUNDAY

It is important to rest prior to the large, heavy, complex movements that are to follow

Again, that's not to say if you clean and jerk 100 kg-plus above your head every week you're going to be walking around permanently anabolic with elevated testosterone levels. If anything the strain this would put on your body could lead to overtraining. But including such lifts in your training once or twice a week would send a natural anabolic surge of hormones through the body.

GETTING LEAN

Research in the *Journal of Applied Physiology* as far back as 1994 showed the positive effects strength training could have on body composition. Scientists asked 13 untrained, healthy men to complete a 16-week strength training programme.

Body fat and muscle composition were then measured using dual-energy X-ray absorptiometry (DEXA) and magnetic resonance imaging (MRI). Following 16 weeks, all the men completing the strength training protocol improved strength in the upper and lower body, increased muscle mass and lowered their body fat both in total and regionally around the arms, legs and stomach.

This is perhaps explained by research conducted at the Department of Food Science and Human Nutrition at Colorado State University, which monitored the post-exercise energy expenditure in men after heavy resistance training. They found that after a strenuous 90-minute weightlifting protocol subjects' post-exercise metabolic rate—the rate at which their metabolism remains elevated and they keep burning calories—remained high for a "prolonged period and may enhance post-exercise lipid oxidation".

Put simply, it means weight training increases the rate at which you burn calories long after you've left the gym—something steady paced cardio doesn't.

Thus, research indicates Olympic lifting could dramatically improve body composition. Better still, it means not necessarily losing weight but rather, increasing muscle mass and lowering your body fat at the same time.

For references to this article go to muscle-fitness.co.uk/scientific-references

See the video that accompanies this feature at *muscle-fitness.co.uk/* olympiclifting







Continuing his series tackling common fitness misconceptions, **Mark Gilbert** asks whether it is time for a rethink about this catabolic muscle killer

As most hardcore gym-goers know, cortisol is almost universally considered to be the most evil, muscle-destroying hormone produced by the human body. It is the scourge of bodybuilders everywhere.

Typically, physiology textbooks describe cortisol as the primary hormonal culprit in causing muscle tissue breakdown and the removal of amino acids from muscle cells-the dreaded "muscle catabolism".

It is also true that traumatic injury, which is similar to the injury to muscles caused by heavy weight training, causes muscle loss, mainly due to increased cortisol release.

On the basis of quite a bit of evidence from different scientific disciplines it seems cortisol really is the sworn enemy of muscle.

This compelling body of evidence has led to the creation of diet, supplement and exercise strategies designed to banish cortisol. These include having certain macronutrients before, during and after exercise, various supplement routines and specific workout protocols. Probably the most prominent strategy

has been the often-repeated recommendation to keep workouts brief—less than an hour-to avoid excess cortisol secretion.

Of course, given cortisol's welldocumented effects on muscle, all of this makes sense. However, as this series is called Myth Busters, you've probably guessed it ain't that simple...

WHAT YOU NEED TO KNOW

Let's start with a quick refresher. Cortisol is secreted by the adrenal glands in response to stressors like injury, fright, lack of sleep, low blood sugar and intense exercise. For our purposes, it's important to know two main things.

1. Cortisol can stimulate the production and availability of fuel in the form of glucose (blood sugar). Usually this is only discussed in the context of providing energy during inadequate calorie intake, but cortisol actually works in cooperation with adrenaline to stimulate the activity of enzymes needed for the breakdown of glycogen, which supplies the majority of energy during intense exercise. Therefore, a

lack of cortisol could result in less energy being available to your muscles while training. In fact, if you decrease cortisol too much you get hypoglycaemia-low blood sugar-which makes you tired, shaky and causes cold sweats. 2. Cortisol also plays a crucial role in controlling inflammation and immunity. Without adequate levels, inflammation after exercise or injury would likely be greatly exaggerated and lead to the breakdown of healthy muscle and other tissue, causing prolonged recovery periods and possibly more substantial and painful DOMS after exercise. This is why one of the most common treatments for athletic injuries is the application or injection of cortisol as it reduces inflammation and pain, and can help restore function.

THE SUB-ONE-HOUR WORKOUT MYTH

With our cortisol primer out of the way, let's address the "brief" workout recommendation.

It's a fact that several studies seem to indicate longer workouts result in greater cortisol secretion. But this may not be directly due to the length of the session. Just as strong an argument can be made that it's down to the fact that longer workouts allow more total work to be done and more muscle damage to occur.

Evidence for this can be found in studies that have shown cortisol secretion can be substantially increased in less than an hour if you hit the iron hard. For instance, when veteran exercise scientists—working in cooperation with the US Army Research Institute—gave a group of subjects six different exercise protocols each containing the same number of total reps but with different rest periods and numbers of sets, not only did cortisol levels increase substantially within an hour, but the group who finished the total number of reps in the shortest time experienced the highest cortisol response.

In this case, the guys who exercised the longest got the lowest cortisol response. Therefore, it seems cortisol secretion is more closely related to exercise intensity than duration.

WHAT ABOUT RESEARCH IN TRAUMA PATIENTS?

Much of the research on cortisol has been done on people in hospital who have experienced severe trauma that's left them bedridden for extended periods.

In these studies, cortisol was identified as being correlated to the extent of people's injuries, how much muscle and strength they lost during treatment and how long they took to recuperate.

In these types of patient—and in cancer sufferers and the elderly—greater loss of muscle is strongly related to prolonged recovery and reduced survival. Because of these strong correlations there is a large and growing body of research devoted to finding out the causes of this muscle loss and potential treatments.

Studies looking at healthy people who avoid activity and lie in bed for extended periods show that they lose substantial muscle and strength and that most of this muscle loss is due to a reduction in protein synthesis. When these same researchers put subjects in a similar scenario but also gave them cortisol—to mimic trauma—subjects lost three times more muscle but this wasn't due to the classic catabolic cortisol effect; this was down to reduced protein synthesis.

So, cortisol seems to actually reduce muscle-building rather than increase muscle breakdown. But all this refers to people who were lying in bed for two weeks. What about guys who lift?

CORTISOL FOR GUYS WHO LIFT

Everything we've discussed so far is more "suggestive" of cortisol's effects in healthy heavy lifters. Let's look at what the deal is with gym-goers.

Well, one thing we know is that hormones show distinct patterns after a weight training session. As we saw when we looked at growth hormone a few months ago, testosterone, GH, IGF-1 and cortisol levels all go up substantially after hitting the weights. But to many people's surprise, the amount that test and IGF-1 go up is actually *not* associated with increased muscle growth.

We know this because when a large group of men all followed a heavy leg training programme for 12 weeks, the guys who got the largest spikes in test and IGF-1 post-exercise didn't gain more muscle. The guys who saw the biggest spikes in GH gained slightly more muscle but more surprisingly, the guys who had the biggest spikes in post-workout cortisol gained the most muscle. As I said earlier, cortisol doesn't just influence muscle size but also mitigates inflammation and low blood sugar. I'm not saying cortisol builds muscle but it is likely that cortisol levels increase to restore or











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post-workout cortisol, the hypertrophy response and anabolic hormones.

Again, don't get me wrong. I'm not saying you should strive to maximise cortisol levels after training. For one thing, we already know that greater post-workout testosterone release isn't correlated with better muscle gains, so it is doubtful cortisol's negative effects would be any different when we're talking about a brief post-workout spike. However, following the same logic, chronically elevated levels of cortisol, like testosterone, are likely to impair muscle gains and even shift the balance towards muscle loss.

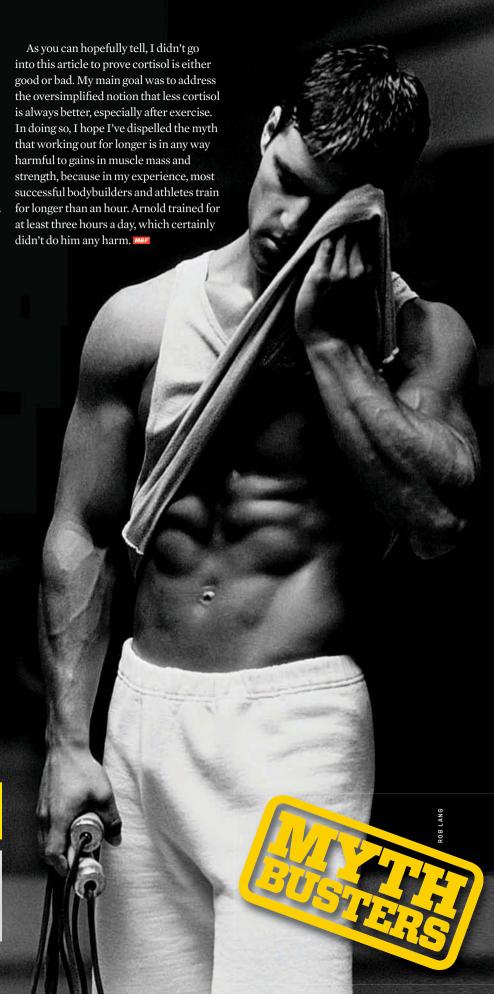
My advice is that there isn't enough good evidence to support the practice of trying to reduce cortisol release excessively during or after exercise. Indeed, it's quite possible this could have more negative consequences for muscle than positive.

However, given today's stressful world—with lack of sleep being common and the fact that other than during or after exercise cortisol seems to cause muscle breakdown-it is logical to believe that reducing cortisol by a small amount would be helpful. Also, many of the things that have a moderating effect on cortisol are known to improve muscle-building activity. For instance, essential amino acids (EAAs) can increase protein synthesis during and after exercise and also reduce cortisol levels. In fact, even in the presence of cortisol and bed rest, EAAs prevent the muscle loss that would otherwise occur. Carbohydrate intake has the same effect and works even better in combination with EAAs.

Other supplements that decrease cortisol levels include phosphatidylserine and vitamin C. Beyond these, just ensuring you get enough sleep and avoiding excess stress can help.

For references to this article go to www.muscle-fitness.co.uk/ scientific-references

MARK GILBERT has a B.Sc. in nutrition and is a CISSN certified sports nutritionist. He's been involved in the sports nutrition industry for 20 years and is a director of MuscleGenes.com and FitnessInventor





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In an era when the fitness industry is trending towards shorter workouts and fewer exercises, there's something to be said for occasionally bombarding your muscles with a mega workload to shock them into growth. This four-week old-school high-volume attack will leave your muscles begging for mercy, but in the end they'll be bigger, harder, and more defined.

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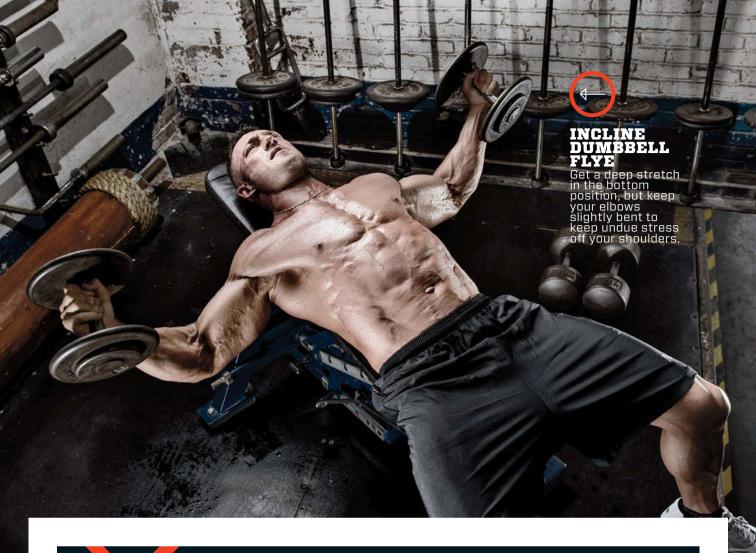
dominant trend in fitness is to pare everything down. Make it simple. Less is more. At least that's the case most of the time. But what happens to the guy who never pushes himself beyond the brink? The guy who stays within the confines of a programme that never drives him past a workload he thought he was capable of? Often, he'll stagnate and cease to make progress.

We understand the need to focus on the big lifts to get the most from your workouts.

We've dedicated plenty of space to that concept over the years, and there is no shortage of programmes if you're trying to get in and out of the gym quickly.

But if those short, concise programmes have been your bread and butter for years—and you've plateaued—you might find Bill Sienerth's high-volume bodybuilding programme to be just what the doctor ordered to stimulate new growth.

Sienerth, a fitness model shown in the photos here, and owner of a supplement store, used the programme he outlines here to sculpt an enviable, finely detailed physique. By using pre-exhaust sets and drop sets, he ensures that no muscle fibre will be left behind. Most exercises are also accompanied by a suggested rep range rather than a specific rep count. This variability makes each workout unique and allows you to choose the most appropriate weight based on how you feel that day. Are you ready to leave your ego at the door for the next four weeks? If you can manage that, a bigger and better body is around the corner.



THE WORKOUT DAY I: CHEST

INCLINE DUMBBELL FLYE

Do 2 light pre-exhaust sets first, with a reprange of 25-50.

SET	REPS
1	15-20
2	12-15
3	8-12
4	8-15

INCLINE DUMBBELL PRESS

Do 2 light pre-exhaust sets first, with a rep range of 25-50.

SET	REPS
1	15-20
2	12-15
3	8-12
4	8-15

HAMMER STRENGTH CHEST PRESS (FLAT)

Do 2 light pre-exhaust sets in the range of 15-25.

CET

SEI	REPS
1	15-20
2	12-15
3	8-12
4	8-15

HIGH CABLE CROSSOVER

Do 2 light pre-exhaust sets in the range of 15-25.

SET	REPS
1	15-20
2	12-15
3	8-12

MID CABLE CROSSOVER

Do 1-2 light pre-exhaust sets in the range of 15-25.

SET	REPS
1	15-20
2	12-15
3	8-12

LOW CABLE CROSSOVER

Do 1-2 light pre-exhaust sets in the range of 15-25.

SET	REPS
1	15-20
2	12-15
3	8-12
PUSH-UP	
CETC	DEDC

3....

....Failure



THE WORKOUT DAY II: LEGS

LEG EXTENSION

SET	REPS
1	40-50
2	25-50
3	20
4	12-15
5	6-12
6	40-50*
HAMSTRING	CUKL
SET	REPS
	REPS
SET	REPS
SET 1	REPS 40-50
SET 12	REPS 40-50 25-50 20
SET 12	REPS 40-50 25-50 20 21

LEG PRESS	
SET	REPS
1	20
2	
3	12
4	8
5	20
HACK SQUAT	
SET	REPS
1	20
2	
3	
4	
CALF RAISES	
SETS	REPS
340)-50*
*Use drop sets as needed reach this total.	

THE WORKOUT **DAY III: BACK**

STRAIGHT-ARM PULLDOWN SET

SEI	KEFS
1	25-50
2	20-25
3	15-20
4	10-15

DEDC

WIDE-GRIP LAT PULLDOWN

SET	REPS
1	25-50
2	20-25
3	15-20
4	
5	8-15

BENTOVER BARBELL ROW SET REPS

~- ·	
1	25-50
2	20-25
3	15-20
4	10-15
5	8-15*

*Add two drops after this, each totalling $20\,\mathrm{reps}$.

MACHINE ROW

SET	REPS
1	.20-25
2	15-20
3	10-15
4	8-15*
*Add two drops after this, each 20 reps.	n totalling

CLOSE-GRIP LAT PULLDOWN

SET	REPS
1	20-25
2	15-20
3	10-15
4	8-15*
*Add two drops after this,	each totalling

20 reps.

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WOMEN'S FIGURE

THE WORKOUT

DAY IV: SHOULDERS

WARM-UP

With a pair of 5 to 10-pound dumbbells, do one continuous set of 30 lateral raises, 30 front raises, 30 rear-delt raises, and 10 overhead presses.

DUMBBELL LATERAL RAISE

SET	REPS
1	20-30
2	15-25
3	12-15
4	10-12
5	8-12

HAMMER MACHINE SHOULDER PRESS

SET	REPS
1	20-30
2	15-20
3	12-15
4	8-12

DUMBBELL REAR-DELT RAISE

SET	REPS
1	20-30
2	15-25
3	12-15
4	12-15
5	8-12

DUMBBELL SHRUG

SET			REPS
1	 	2	20-50
2	 	2	20-25
3	 	·	15-20
4	 		8-12*
5			
44.11	-	1.10.0	

 $^*\!Add$ one drop set of an additional 20 reps.

DUMBBELL SHRUG

Shrugs should be heavy, but again, you need to check your ego. If you can't hold the top position (shown) for two seconds per rep, the weight is too heavy.





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THE WORKOUT DAY V: ARMS

CABLE PUSHDOWN SUPERSET WITH CABLE CURL

SEI	KEPS
1	30-50
2	12-15
3	10-12
4	10-12

SKULL CRUSHER SUPERSET WITH

HAMMER CURL

SET	REPS
1	15-20
2	12-15
3	10-12
4	8-10

TRICEPS MACHINE PRESS SUPERSET WITH

BICEPS MACHINE CURL

SEI	KEP5
1	15-20
2	12-15
3	10-12
4	8-10

CONCENTRATION CURL

SUPERSET WITH **REVERSE-GRIP TRICEPS**

CABLE PUSHDOWN SETS REPS 5.....15-20

THE WORKOUT ABS & CARDIO

Abs are done every day. Perform the following exercises as a circuit, resting 30 seconds to a minute between rounds.

ARS

ADS	
SET	REPS
Standing Ab Crunch	15-20
Lying Leg Raise	25-30
Hanging Leg Raise	25-30
Plank	.60 sec.

CARDIO

Do 30 minutes of steadystate cardio every day of the programme. We like hitting the heavy bag.













always difficult trying to decide who's the fittest. Fitness, after all, comes in various forms but if you subscribe to the view that it is a combination of aesthetics and performance then Emma Paveley deserves the title of Britain's fittest woman.

Paveley has the kind of physique that would shine in any figure contest. Her lean and muscular body looks good from any angle but she is as far from the stiff, muscle-bound bodybuilder stereotype as you can imagine.

The former gymnast can tumble and somersault and perform levers, handstands, the splits and press-ups. This combination of physique and functionality earned her the title of UKBFF British fitness champion in October. Shortly afterwards she finished third at the world championships.

Fitness contests are judged over two rounds: the first assesses physique; the second scores a performance routine. In Paveley's world you need to impress standing still and on the move.

Americans, Canadians and eastern Europeans dominate the events. Kizzy Vaines is the only current British IFBB fitness professional. Paveley hopes that a strong performance at the Arnold Classic in America from March 5 to 8 will elevate her on the road to the paid ranks. One thing is for sure: at just 24 years old, she is set to soar even higher.





TUMBLING TO THE TOP

Paveley was a gymnast from the age of seven to 15. She never represented Britain but was a regional champion, known for her powerful physique. "I always had comments about how muscular I was." she savs.

At the time she hated it. "I used to try to hide the way I looked because I was so broad," she says. She was so desperate to fit in that when she quit gymnastics the only exercise she did for the next few vears was cardio and abs work.

But things changed when she met personal trainer boyfriend Antony Van Leemputten at the age of 20. He encouraged her to lift weights and she discovered a world where her physique was admired.

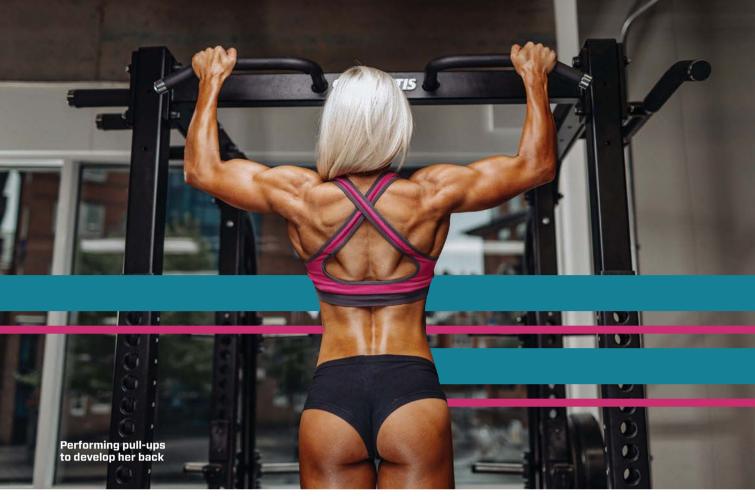
Paveley yearned for another physical challenge and discovered fitness competitions. "I knew from my upbringing in gymnastics that I had a good base."

She entered her first contest aged 21 and although she had some impressive moves her physique wasn't up to scratch and she finished second in a class of two.

It was an inauspicious start but Paveley's quiet, laid-back demeanour masks a fierce competitor. "I'm very driven," she says. "If I want something I put pressure on myself to do it."

She trained harder and in 2012 finished fifth at the UKBFF British Championships. The following year she placed fourth but knew she could do better. "At the beginning I was just competing for the experience," she says. "I trained every day but I wasn't lifting weights seriously."





Two years ago Paveley started a proper, structured lifting programme and devised more creative routines. The results have been astonishing.

At the end of 2013—her last year as a junior-she finished fourth at the IFBB Junior World Championships in Mongolia. It was the highest placing ever by a British junior in fitness.

Many juniors struggle to make the transition to the senior ranks but Paveley's rookie year in 2014 could hardly have gone better. She finished third at the European Championships in Spain, fourth at the Arnold Classic Europe, first at the British Championships and third at the World Championships in Canada.

In less than a year she had gone from promising junior to best in Britain and a leading international competitor. If she does well this year she could soon be competing against the sport's superstars, such as Fitness Olympia champion Oksana Grishina.

After years of trying to downsize, Paveley's physique is now approaching its full potential, particularly her lower body. Like many juniors, her hamstrings and glutes looked soft and underdeveloped compared to the top seniors but under her new regime her rear poses have become a

strength in the physique round.

Her routines are, well, less routine. "In gymnastics everything has to be technically perfect but fitness is about performing an amazing routine," she says. "I used to struggle with that because I had a gymnast's mindset and consequently my routines were boring.

"Fitness is more about putting on a performance rather than just displaying technical value. I prefer it to gymnastics. It's a lot more fun."

Fitness is a niche sport with few competitors because it's so demanding. Building a lean and muscular physique is

EMMA'S DIET

8am Porridge

10.30am Rice cakes and cottage cheese

12.30pm Chicken, rice and spinach

3.30pm Chicken, rice and spinach

WORKOUT

6.30pm Protein shake consisting of 50% whey and 50% casein

7.30pm White fish, wholegrain pasta and greens

9.00pm Greek yogurt

beyond most people; being able to do that and perform a 90-second performance routine that incorporates elements of strength, balance, flexibility and acrobatics requires almost super-human abilities.

EMMA'S WEEKLY WORKOUTS

Monday

Weights-back

Tuesday

AM Weights-shoulders

PM Performance routine training

Wednesday

Rest

Thursday

Weights-chest and triceps

Friday

Weights-legs

Saturday

Weights-abs and calves

Sunday

Performance routine training

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It's this degree of difficulty that makes fitness competitors some of the most remarkable athletes on the planet. They have to build muscle while retaining suppleness; perform somersaults on stages that are often dripping with oil from bodybuilders that have just competed; and display unlimited energy for routines that are executed when their bodies are depleted from dieting.

Many are ex-gymnasts but Paveley says: "You don't necessarily have to be a gymnast. Some women did ballet or dance or aerial skills. It's about poise and moving your body in a beautiful, elegant way.

"It's judged on performance: tempo, cardiovascular poise and elegance as well as strength. The criteria at professional level are stricter but essentially it's about being a bodybuilder but still moving in a gracious way."

Such a punishing sport requires a punishing training schedule. Each week Paveley trains with weights five times and practises her routine twice.

"The hardest part is making time for the routine," says Paveley, who works in accounts. "Your body is aching all of the Paveley's partner is a Y3T trainer, which means he advocates Neil "Yoda" Hill's weekly cycles so she lifts heavy weights in week one, medium weights in week two then lighter weights and high volume in week three. "It works wonders for me," she says.

Her split varies but she trains each body part once a week. We have listed a typical week here.

Her legs have improved hugely over the last year. She has squatted 100 kg for four reps although she goes lighter now. But she hates training them. Adding muscle and shape, without sacrificing flexibility, is a never-ending challenge. "I'm not as supple as the other girls so I'm continuously working on it."

Paveley, however, has got used to being different and learned to love the way she looks. "I enjoy the lifestyle and seeing results, and the feeling of your hard work paying off gives me the motivation to carry on."

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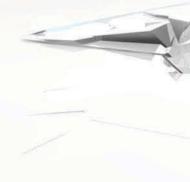
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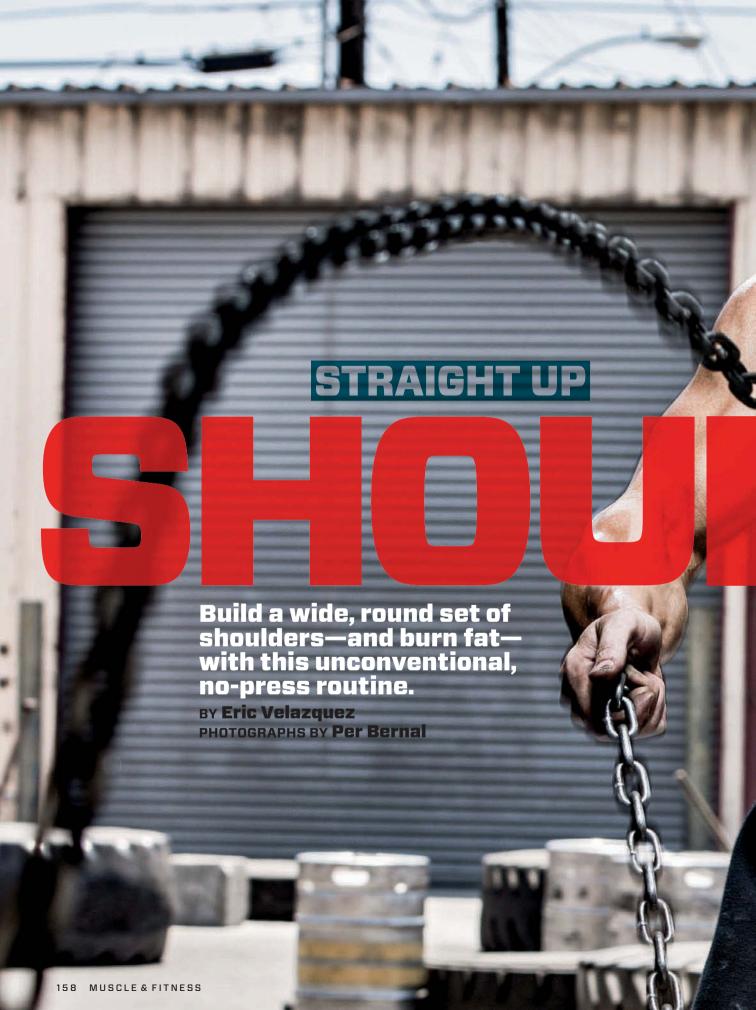


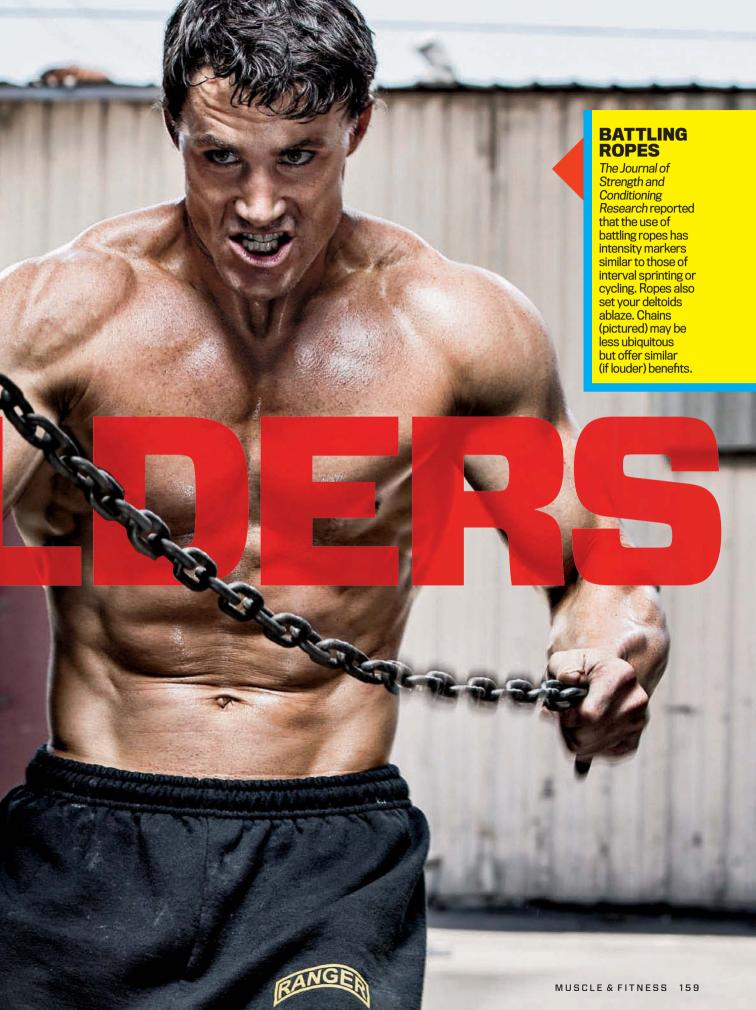
















While undoubtedly effective, pressing can take a toll on the connective tissues of the shoulder joints. This is even more of an issue if you're using a barbell, which tends to leave you fighting your body's desired range of motion. Besides that, it can get a little dull after a while.

In this programme, you'll use moderate to heavy upright rows with a rope attachment at a cable

station, which hold plenty of the same benefits but with a smoother, more natural range of motion. Then, after those more traditional sets, you'll do highvolume, HIIT-inspired shoulder work using light dumbbells and battling ropes. The result is a complete, sweat-soaked routine that heavily taxes each of the three deltoid heads while also helping you get diced.

Barbell shoulder pressing can damage the connective tissue of the shoulder joints and fight your body's desired range of motion.

THE WORKOUT SHOULDERS

EXERCISE	SETS	REPS/TIME
Upright Row	4-5	10-12 ¹
Fortune Raise	3	3 min. ²
Battling Ropes	3	Tabata ³
Face Pull	3	15

1 Choose a weight that brings about failure at the rep range listed. Rest no longer than one minute between sets.

2 Set a timer for six consecutive 30-second segments using a smartphone app or Gymboss. Alternate between shadowboxing and dumbbell raise variations for 30 seconds each for what amounts to three straight minutes of work. Use three- to five-pound dumbbells, and focus on constant, controlled movement. Rest no longer than one minute between rounds or sets.

3 Using your timer, perform these Tabatastyle, completing eight 20-second segments of all-out work, each followed by 10 seconds of rest. Alternate between two-handed slams and alternating waves in each work segment.



FORTUNE RAISE

This challenging shoulder move is a frequent go-to for fighters in the stable of boxer Manny Pacquiao's trainer and strength and conditioning coach Justin Fortune (fortunegym.com). Shadowbox for 30 seconds holding dumbbells, focusing on throwing brisk, straight punches. Alternate with 30 seconds' worth of dumbbell raises. (See key for suggestions.)

Everyone at Muscle&Fitness was deeply saddened by the passing of fitness icon Greg Plitt in January this year. Greg was among the most popular and inspirational figures in the industry and it's no exaggeration to say that he possessed one of the most revered physiques of all timeas seen in the photos accompanying this article, taken shortly before his passing. Thanks to pictures like these, although he is no longer with us, Greg will continue to inspire gym-goers for many years to come.

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THE LATEST IN SUPPLEMENT AND PRODUCT NEWS

UNDER THE MICROSCOPE

Taking a purely scientific look at the best products in the world of sports supplements BY TIM N. ZIEGENFUSS, PhD. FISSN

WE EXAMINE THE CRITICAL ACTIVE INGREDIENTS IN VARIOUS SPORTS SUPPLEMENTS. We award high marks to those with existing supportive data, real-world results and innovation in formulation. Here we put VPLAB*** NUTRITION AMINOPLASMA under the microscope.

AMINOPLASMA is a speciality formula that contains whey protein hydrolysate, beta-alanine, arginine, glutamine, and the branched-chain amino acids (BCAAs). Collectively, these ingredients help build muscle, reduce fatigue, and enhance nitric



oxide production. This versatile formula can be used before/during training or any time a high quality protein source with added benefits is desired.

WHEY PROTEIN HYDROLYSATE (WPH) is a

protein that has been treated with enzymes to break it down into chains of di- and tri-peptides. These di- and tri-peptides are rapidly absorbed intact into the digestive system, and cause a dramatic increase in blood levels of amino acids (even faster than whey protein isolate) as well as a robust increase in insulin levels. One study showed that subjects given WPH regained their ability to generate muscle force in only six hours. In contrast, regular whey protein isolate (WPI) had no such effect.

GRADE: ★★★★★

REASON: WPH is a lightning-fast protein that increases muscle protein synthesis and facilitates recovery from intense training.

BETA-ALANINE is a widely popular amino acid that reduces muscle fatigue during intense exercise. When beta-alanine is ingested, it combines with another amino acid called histidine to form a compound called carnosine. In exercising muscle, carnosine acts as a potent buffer of hydrogen ions that are generated from lactic acid (lactate) production. This is relevant to bodybuilders during sets that last longer than about 60 seconds or when training with short rest periods where lactate accumulation can reduce the total number of repetitions completed. In theory. beta-alanine may also be useful during very low-carb diets to offset changes in pH due to ketone production. For best results, beta-alanine must be consumed continuously for at least four weeks.

GRADE: *****

REASON: Beta-alanine helps reduce fatigue during intense bodybuilding exercise, thus allowing for a greater training stimulus. All other things being equal, a greater training stimulus equates to greater gains over time.

ARGININE is a conditionally essential amino acid found in meat, seafood, nuts and soya. Due to its role in nitric oxide production and as a potential growth hormone secretagogue, arginine has enjoyed a rich history in sports nutrition.

In one study, subjects given 6 g of arginine (along with other vitamins and amino acids) improved their time to exhaustion by 20% compared to the placebo group. Other studies have reported lower levels of ammonia and lactate when various forms of arginine are consumed prior to exercise. Despite these acute benefits. the effects of long-term arginine supplementation on muscle growth and the acquisition of strength are quite variable. However, since arginine can be converted to creatine, citrulline, and agmatine (a signalling molecule that enhances blood flow), it is considered to be a very versatile amino acid.

GRADE: ★★★★

REASON: Although the benefits of arginine are not universally observed, no study has ever reported a decrement in performance. Moreover, many consumers and athletes are convinced of its benefits based on past use.

BCAAs are used by many athletes in-between meals in the hopes of sparing muscle protein breakdown, restoring anabolic signalling, and (potentially) upregulating fat loss. The BCAAs are unique among amino acids because they are the only ones thought to bypass the liver and be metabolised directly in skeletal muscle. Even though all three BCAAs utilise the same mechanism to enter muscle, most experts advise against taking high doses of just one amino acid, and I generally agree with this assertion because when only one BCAA is available to the body, the other two can become "rate limiting". In other words, leucine works best to stimulate muscle protein synthesis when isoleucine and valine are also around at normal "permissive" levels. Typically, BCAAs are used several times per day, particularly during dieting phases or when muscles are especially sore from training.

Experimentally, BCAAs have also been shown to help speed muscle recovery from intense training.

Although the mechanisms are not completely clear, it appears that BCAAs act as signalling nutrients and are able to promote the phosphorylation of proteins directly involved in muscle protein synthesis (mTOR, eukaryotic initiation factors, etc). In addition, some scientists have speculated that long-term use of BCAAs may also aid in fat loss efforts, as isoleucine has been shown to increase the activity of genes controlling fat burning and decrease the activity of genes controlling fat storage. Some data also exists that shows leucine itself can increase fatty acid oxidation and increase mitochondrial biogenesis (more mitochondria) in both muscle cells and fat cells.

Lastly, many endurance athletes also use BCAAs to combat fatigue and enhance their aerobic performance. During prolonged aerobic exercise, BCAAs are thought to reduce the uptake of L-tryptophan (an amino acid that is converted to serotonin) into the brain. The end result is a reduction in what is known as "central fatigue" and enhanced performance. In addition, at least one study has reported increases in red blood cell count. haemoglobin and haematocrit in subjects given only 2.2 grams of BCAAs during middle- and longdistance endurance training. This seems to suggest an "EPOlike" effect of BCAAs that would improve performance. That said, endurance athletes wishing to try BCAAs should do so in combination with their normal intake of carbohydrates.

GRADE: ★★★★★

REASON: BCAAs are versatile compounds that can enhance the effects of most intense training programmes.

GLUTAMINE is a "conditionally essential" amino acid that makes up about 50% of the total amino acid pools in the body. It plays a critical role as a fuel for intestinal and immune cells, is a precursor to the powerful antioxidant molecule glutathione, stimulates

the production of citrulline (which has anti-fatigue and nitric oxide producing properties), regulates acidbase balance, acts as a carrier of nitrogen between various tissues. and is a precursor of many other important compounds within the body. This superstar amino acid has been the darling of the supplement industry for decades, and has leagues of devoted and convinced followers despite a clear lack of evidence supporting its anabolic or anti-catabolic effects in healthy humans. What is clear though, is that glutamine is extremely beneficial for gastrointestinal health, prevention of upper respiratory tract infections, and in anyone who has a low dietary intake. In short, glutamine may or may not help your muscle building efforts, but it certainly won't hurt either.

GRADE: ****

REASON: There are many reasons to ingest supplemental glutamine. namely to promote cardiovascular/ gastrointestinal health, and to reduce muscle loss during any kind of muscle wasting, trauma, or infection.

LYSINE is an important amino acid involved in the absorption of calcium and the formation of carnitine. The body also uses lysine in the regulation of connective tissue health (e.g., skin, cartilage and tendons). There is also some evidence that supplementing with lysine can reduce the occurrence of cold sores and genital herpes, improve immune function, and reduce anxiety.

GRADE: ★★★★

REASON: Although lysine is not a muscle builder per se, there are many reasons to include it in your normal diet. M&F

THE RATINGS

★★★★★ Outstanding scientific research on humans available

★★★★ Solid research available; anecdotally effective

★★★ Not much human research available but premise is sound

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will be kept as fresh as your bulk chicken breasts-and much fresher than in supermarkets, where fish can be left on the shelves for days.

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The company says each serving of Hydra 6 contains 12.5 grams of protein from premium whey protein isolate, with no inferior concentrates, and 12.5 grams of protein from low-heat, ultrafiltered, native micellar casein, with no inferior caseinates, for a total of 25 grams of protein per serving which can be taken before training, after training, before bed or indeed any other time you want quality protein.



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Juliet Barratt, CMO at Grenade said: "We are excited to partner with Born Survivor. It is an ideal fit! Our brand is about energy, personal challenge and pushing yourself to the limits to achieve goals. Born Survivor, designed by members of the Royal Marine

Commandos, does exactly that whilst encouraging participation and teamwork."

Kevin Bedford, Born Survivor's event director, said: "Partnering with a brand like Grenade is fantastic news for Born Survivor. The nature of their exciting product range is a perfect match for us, and we all love the way the product packaging looks too, all of which is right on brand for Born Survivor.

"Our 10 km obstacle event is all about people seeing what they can take, both physically and mentally, and having Grenade on board will mean we can help them achieve their training and performance goals. We know our participants and fans will be delighted to hear the news." Mee For more information go to

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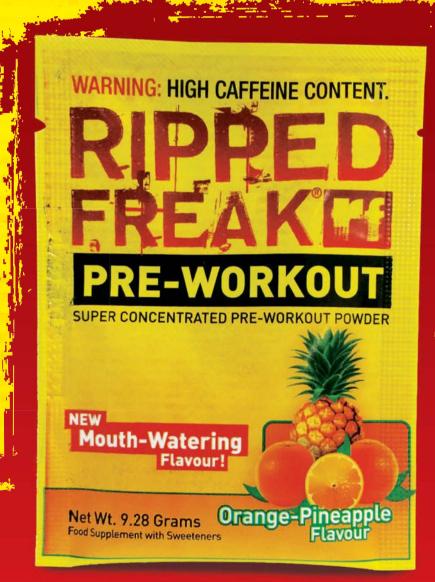
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ADVICE ADVICE AND SUPPLEMENTATION FROM TOP ATHLETES AND FITNESS PROFESSIONALS

THIS MONTH'S HIGHLIGHTS INCLUDE

Michelle Brannan on training and nutrition to keep your body guessing

Harry Aikines-Arveetey on whether he's really the world's biggest sprinter

Phil Learney sets out the top exercises for building a better back

Sports nutrition expert

James Collins explains

why taurine might be

more than just an

energy booster

The latest research on why you shouldn't overcomplicate your workout

EXPERT TRAINING TALK

THE COLOSSUS **OF CARSHALTON**

European sprint champion HARRY **AIKINES-ARYEETEY** on whether he's the biggest sprinter in the world

Bv Matt Turner Photography by Mark Shearman

SPRINTERS ARE KNOWN FOR PACKING A LOT OF MUSCLE.

One man who's carrying even more than most is European champion Harry Aikines-Aryeetey, 26. The powerfully built Brit has frequently been described as the world's biggest sprinter. But he's equally well known for his prowess on the track, where he forms an integral part of Britain's current golden generation of sprinters.

Last year he took gold in the 4 x 100 m relay at the European Championships and bronze in the individual event. This year, he's aiming to challenge for a medal at the World Championships ahead of a trip to Rio for the 2016 Olympics.

MUSCLE&FITNESS: When did you first get into sprinting? HARRY AIKINES-ARYEETEY: When I

was about 11 I got chased by a dog. I flew on that occasion. Someone saw me and told me to get down to my local track. I thought about it for a while and eventually decided to have a go.

Are you the biggest sprinter in the world?

I don't know. I'm a fair size but what people don't realise is that Usain Bolt is massive. He's 6 ft 5 and carries a lot of muscle-you just don't notice because he's so tall. I'm not far off though. I'm probably top five.

What came first, the sprinting or the size?

I was huge even when I was born. I did go through a skinny phase and wasn't that tall, but by the time I was 14 I had good pecs and big biceps.

How did you get so big?

I've got a lack of myostatin, which goes some way to explaining it. But it's mostly down to good genetics and the training I do, which enhance that. More people should do athletics. It builds a good base for a great physique and helps you in other areas as well-you can jump higher, run faster, etc., A lot of the females in this sport who don't reach the highest level go into bodybuilding or bobsleigh or something else. Just doing running alone, they end up with solid glutes, nice hamstrings, big quads and strong calves. Athletics gets you into a shape where you look great and are capable of performing well in lots of other sports.

Is there a point where you could be too big?

Yeah, definitely, I've actually slimmed down a lot from what I used to be; I think I've been up to 89 kg. I was absolutely huge. Now I've slimmed down, changed my training and become a bit more athletic. In the last couple of years I've stayed away from the gym to a certain extent. Now I'm in a position to get back in properly without getting too big. I'm keeping it specific to the track.

What does your training week look like?

Monday: Acceleration sprint session and weights

Tuesday: Tempo sprint session Wednesday: Technical sprint session and weights

Thursday: Light sprint session or rest Friday: Speed endurance sprint session and weights

Saturday: Light sprint session

Sunday: Rest

Describe a weights session.

They're normally quite short, no more than an hour. On Mondays I do front squats, leg press, some weighted chin-ups and calf raises. Then on Wednesday I might bench and do some other supplementary exercises. On Friday I go back to front squatting and leg pressing. It's new to me at the moment. In the past I didn't do any upper body at all.

Why was that?

I didn't want to risk getting too big. I don't exactly need to get any bigger.

What kind of rep range do you work in?

At the moment I do four sets of three, or four sets of two. I front squatted 160 kg for two the other day. I don't do any more than four or five on the front squat for the first few weeks. Maybe 120 kg for five for three sets.

We hear you can throw some big numbers around.

My PB for the clean is 180 kg and I can front squat 200 kg. I've also benched 170 kg. My stats are up there but how much do I really need? How much of that am I actually utilising on the track? That's what I'm working out at the moment. If it works for you, great, but since I've slimmed down a bit I'm going better on the track.

Why the front squat?

I have three stress fractures in my back so I can't really back squat. Also, front squatting allows a lot more control. It also makes sure your technique is spot on. A lot of people can back squat with bad technique but that's impossible with the front squat.

Is your back a big problem?

It's just something I have to manage. I have to avoid certain things but that just means I have to find different ways to help me run faster. I'm actually in a position now where I'm stronger, fitter and faster than ever.

Harry Aikines-Aryeetey was due to compete at the Sainsbury's Birmingham Indoor Grand Prix in February.



EXPERT TRAINING TALK

WELSH WONDER

RHIANNON PONTIN on training to reach the top in bikini fitness **By Matt Turner** Photography by Simon Barnes

WITH THE BRITISH BODYBUILDING **SEASON DUE TO GET UNDERWAY**

NEXT MONTH. hundreds of fitness fanatics are in the final stages of getting in peak condition. Like most of the women among them, Rhiannon Pontin, 31, will be taking to the stage in the phenomenally popular bikini fitness class.

Last year the Newport-born beauty finished fourth-in a class of 32-at the British Championships, establishing herself as one to watch this year. With some further improvements to her physique, Pontin could well be challenging for the top honours in Nottingham this October.

We caught up with her as she prepared for the UKBFF Nationals on April 12th.

MUSCLE&FITNESS: When did you get into training?

RHIANNON PONTIN: I joined my local running club at the age of 18. A year later I met my partner, who is a Muay Thai instructor, and I started doing kickboxing with him as well.

When did you start weight training?

After the birth of our son, my partner suggested I enter a figure contest as I like to have a focus for my training. I liked the idea and started weight training with the aim of competing at the 2012 NABBA Wales show. I entered the toned figure class and was really surprised when I won.

Why did you switch to bikini?

Last year I took a look at myself and decided I wasn't carrying enough muscle to compete at the top level in toned figure. After looking at a few European bikini competitors online I felt my figure was more suited to that category. I did my first show in September, the UKBFF Welsh Championships, and finished second in the bikini short class. A month later I finished fourth at the British finals.

What do you need to work on?

I need to get my waist to look as small as possible, so I'm working on my posing and practising stomach vacuums. I'm also staving away from anything that might thicken my core, like heavy squats, heavy deadlifts and weighted ab work.

What's your training split?

I like to change my routine fairly regularly to keep my body guessing and I'll add more cardio before a show, but at the moment it looks like this:

Monday: Legs **Tuesday:** Shoulders Wednesday: Cardio Thursday: Rest

Friday: Back and biceps Saturday: Cardio

Sunday: Chest and triceps

What is your best body part?

My legs. I've always had well-developed legs, probably thanks to my running days. I've found they respond best to high reps, so I stay away from lifting too heavy.

Describe a typical leg workout.

Leg press: 4 x 15-20 reps Hack squat: 3x15-20 reps Leg extension: 3x15-20 reps Hamstring curl: 3 x 15-20 reps Stiff-leg deadlift: 3 x 15-20 reps Walking lunge: 3 x 15-20 steps each leg Standing calf raise: 3x20-30 reps.

Do you favour any techniques in your training?

I do use supersets and drop sets but I try

not to get too technical. I just put in maximum effort and intensity in every set.

Volume or high intensity?

I definitely follow a volume approach. My weight sessions last approximately one hour with short rest periods between sets.

What do you do for cardio?

I love running, so that always forms the core of my cardio routine. On cardio days I'll warm up on a crosstrainer for 10 minutes and then run for five km on the treadmill, aiming for the fastest time possible. If I can't complete five km in around 20 minutes I feel my fitness is slipping. I'll then do 15 minutes on a bike as hard as I can.

Before a show I'll also do fasted cardio in the morning. I'll get up, take my caffeine supplement, and 30 minutes later I'll do 45 minutes on my spinning bike on an empty stomach. I've heard arguments against fasted cardio but it works for me.

What is your diet like?

It's quite basic but I do have a weakness for cakes and biscuits. I always try to eat a gram of protein per pound of bodyweight. I also keep my water intake high and drink around four litres per day. I generally stick to three meals a day but I do have snacks if I'm hungry, usually a small Greek yogurt with blueberries, a handful of nuts, or an apple.

Describe a typical day's eating.

Breakfast: 3 whole eggs, scrambled and cooked with coconut oil and spinach Lunch: Minced turkey and green veg Post-workout: Protein shake and a banana **Dinner:** Salmon with green veg and 150 g basmati rice

What's your favourite cheat meal?

I love Thai food so my favourite cheat option would be going for a lovely meal at a good Thai restaurant.

If you could only have three supplements, what would they be?

BCAAs to help prevent muscle loss during training and cardio, caffeine, which I take pre-workout to improve my focus and intensity, and fish oils to keep my heart and joints healthy.



EXPERT TRAINING TALK

HIGHLAND WARRIOR

Former Olympic bobsledder **SCOTT RIDER** is now making

a name in Highland Games

By Ben Kenyon Photography by Billy Cullen

MOST ATHLETES WOULD BE SATISFIED TO REACH THE TOP IN

ONE SPORT. Not Scott Rider-he has conquered three. The Kent native was part of Britain's bobsleigh team at the 2002 Salt Lake City Winter Olympics. He then became British shot put champion and competed at the 2014 Glasgow Commonwealth Games.

But since 2005 Rider has been tackling a third challenge: the age-old warrior sport of Highland Games. He has won the Braemar Games three times in front of the Queen and 20,000 fans and been victorious in the World Caber Championships. His ambition now is to win the World Highland Games Championships.

MUSCLE AND FITNESS: What is vour sporting background?

SCOTT RIDER: My first serious sport was bobsleigh. I was a good sprinter and fairly strong so I did a try-out and got into the British team quickly. I went to the Olympics in 2002 and did the four-man bobsleigh. I retired the year after because I needed to go back to work. I got involved in athletics and shot put and went to a few Commonwealth Games. In 2005 I got introduced to the Highland Games-it is a natural progression from track and field.

What kind of athlete excels at the Highland Games?

Powerlifting, weightlifting or bodybuilding would be a terrible way to come into the Highland Games-you need to have a throwing background. People who only lift weights can be kind of one-dimensional because everything is done in a straight line.

Strongman would be a slightly better option if you are good at moving. You need a track and field background.

How do you develop athleticism?

First of all you have got to have the skill set. You have to get strong and you have to get explosive. You need agility and need to get the footwork down-so sprints, jumps and medicine ball work.

We do lots of drills with the implements-if I could only do one thing it would be throw. Throwing in these events gets you strong because you have 56 lb weights and you have to swing them round with one hand. It is not easy. I have seen some of the strongest guvs in the world try and do the 56 lbs for distance and they just can't figure it out.

Describe your weekly training.

My training is modified around what I have time to do. I am pretty agile and fast so that is the thing I neglect in my training. Strength-wise I am probably one of the weakest at the games so I am concentrating on my Olympic lifting. I do the basic stuff like bench, squat, deadlifts and rows and some kind of overhead work. Then power cleans and power snatches and push presses and power jerks are really the important things for me.

What is your strength work like?

It depends what time of year it is. My Olympic lifting is heavy. I never lift more than three or four reps, or occasionally fives. This time of year it is just pure maintenance. I will do 20 games a month when I am in Scotland so there is not a lot of time to train.

Sometimes I will do five games in five days but still lift on the evening of the fifth day because I need to get into the gym at least once a week.

That is my strategy: do a main tenance session to build up to 80-90% singles on four lifts and then if I sustain that over the month I will not get any weaker.

How much do you lift?

My pure strength is not particularly impressive. I have squatted over 600 lbs back squat full depth and bench pressed 440 lbs-probably one of the lightest benches at the games; there are guvs who have done 600 lbs plus. My Olympic lifts are up there-I have power-cleaned 400 lbs for two reps with straps and hang-snatched 308 lbs. They are not unusual lifts for these guys.

What is your best event?

The caber, I run faster than anyone else in the world with a caber. If the caber is really long and heavy I feel I can turn a stick that maybe no one else can turn. If it is shorter and lighter then there is more luck involved. It can swivel on you and fall to the side. But when it is really long and really heavy it takes luck out of the equation and the best guy wins.

It just clicked for me-but funnily enough it is the only event I don't train. M&F

SNAPSHOT

Age: 36

Born: Harlow. Essex

Lives: Wilmington, Kent

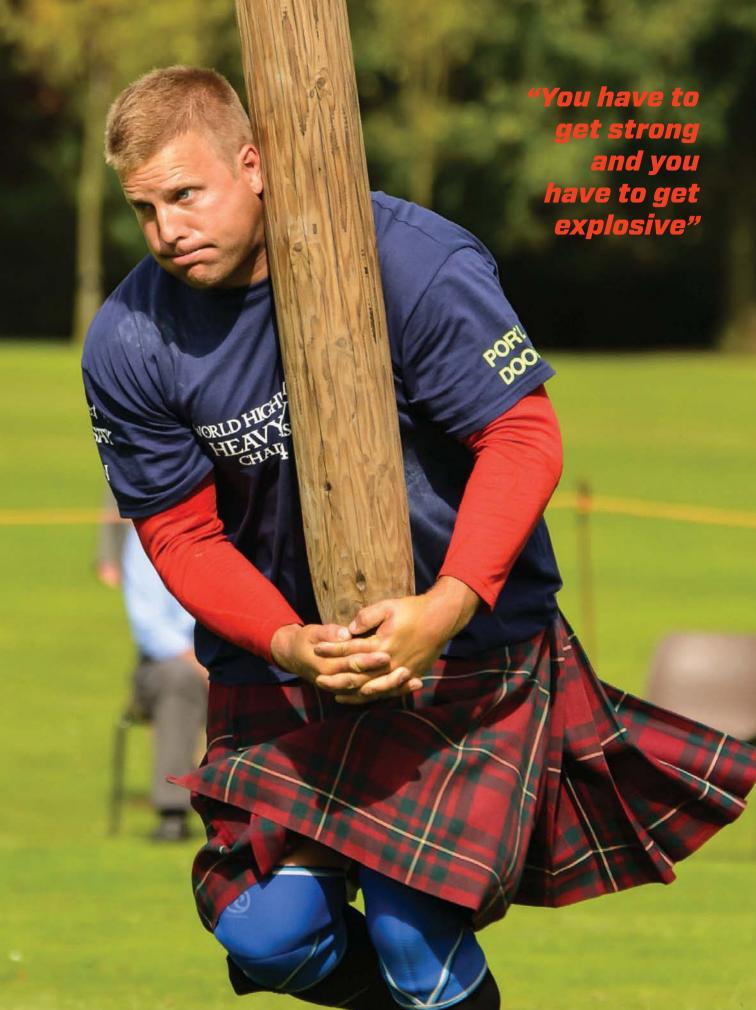
Height: 188 cm / 6 ft 2 ins

Weight: 116 kg / 256 lbs

Career Highlights: Going to an Olympics is pretty special and being the British champion in shot put

Ambition: To win the World **Highland Games Championships**

Training Advice: If you don't throw, you need to. The best way is to get down to your local athletics club and start throwing shots, throwing weights and swinging hammers around your head.



JNCTION

Taurine isn't just an energy booster; it also keeps your muscles working properly

By James Collins and Mark Hobden

Most people will have heard of taurine thanks to its inclusion in caffeine-rich energy drinks. But taurine is also found naturally in the diet with meat and seafood both excellent sources. An amino acid, taurine is involved in many physiological processes in the body and is particularly important for the maintenance of cardiovascular, central nervous system and eye health.

A recent study, published in the Journal of Applied Physiology, provides new evidence taurine also plays a fundamental role in the effective functioning of type I and type II skeletal muscle fibres. More specifically, they found physiologically low levels of taurine can compromise the contractibility of muscle fibre, which is of particular significance for those following a strict vegan diet. Moreover, these findings also increase interest in taurine as a potential performance enhancing aid.

MAIN FINDINGS

 Exposing human skeletal muscle biopsies to taurine for more than 10 minutes increased the rate of calcium accumulation. although the maximum amount of calcium accumulated was unchanged.

Accumulation of calcium was similar with 10 or 20 millimolars (mM) of taurine, whereas accumulation was slower at 5 mM.

SIGNIFICANT METHODOLOGY

Eleven healthy adults volunteered for the study. They received a local anaesthetic injection before a muscle biopsy was removed from the vastus lateralis muscle (part of the quadriceps) by a medically trained researcher. The muscle biopsy was then subjected to different concentrations of taurine-5, 10 and 20 mM. Accumulation of calcium, which is responsible for triggering the contraction of muscular proteins, was then measured.

TAKE-HOME MESSAGE

It appears taurine plays a key role in the contraction of muscle fibres. Therefore, those who have low levels of taurine-such as those on strict vegan diets-may be at risk of compromised muscle function.

Vegans may struggle to get sufficient taurine as non-meat and non-dairy dietary sources are rather limited although granola and oatmeal are good sources. Supplementation is also an option, but the recommended intake should not be exceeded as this is known to induce side effects like nausea and drowsiness.

Because low taurine levels may compromise muscle function, this raises the question whether high dietary intakes may have the opposite effect. However, it has been shown that increasing taurine intake does not raise the taurine content of muscles past normal levels. Nonetheless, there is evidence-most notably from a study published in 2012-that an acute dose of 1,000 mg taken two hours before exercise could improve exercise performance.

It should be said, many of the other studies into the performance enhancing benefits of taurine are confounded by the fact that they tested drinks that also contained caffeine. But there is sufficient evidence to suggest gym-goers may get a slight performance boost through having taurine in a pre-workout drink or meal. Of course, many popular energy drinks rich in taurine are fizzy and particularly high in caffeine and sugar, so they should be avoided before exercise due to the risk of side effects such as gastrointestinal discomfort and nausea.

tka TL, Lambolev CR, Murphy RM, Lamb GD (2014). Acute effects of taurine on sarcoplasmic reticulum Ca2 accumulation and contractility in human type I and type II skeletal muscle fibers. Journal of Ap

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TRAIN LIKE A PRO



EXPERT PERFORMANCE NUTRITION

OH, NUTS!

Pistachios and other raffinose-rich foods may impair performance.

Your gut is vital to your exercise performance, particularly in endurance-based sports and events. Disturbances to the functioning of the gastrointestinal system may lead to a condition known as "leaky gut syndrome", which is associated with abdominal discomfort, cramp, nausea and diarrhoea. The gastrointestinal lining is also a barrier that regulates the uptake of nutrients and inhibits toxins from entering circulation, which affects the amount of inflammatory and oxidative stress caused by training.

There is currently a lot of interest in how certain food ingredients can reduce the inflammation and oxidative stress caused by exercise, and potentially reduce the permeability of the gastrointestinal lining. With this in mind, professor David Nieman has recently investigated the impact of eating an increased amount of pistachio nuts for two weeks-naturally rich in an array of antioxidants.

Somewhat unexpectedly, his team found that an increased intake of pistachios increased exerciseinduced oxidative stress-likely as a result of increased gastrointestinal permeability-and impaired exercise performance.

MAIN FINDINGS

- Two weeks of pistachio nut intake reduced cycling performance by 4.8% compared to the control.
- Blood analysis revealed that during the pistachio nut cycling test significantly more raffinose and sucrose translocated to the circulation, indicating an increase in gastrointestinal permeability. Elevated levels of circulating raffinose were also correlated with an increase in markers of oxidative stress.

SIGNIFICANT METHODOLOGY

Nineteen cyclists took part in the study and completed two 75 km performance time trials on a cycle ergometer. The trials were performed after two weeks of increased intake of pistachio nuts (85 g per day) or after following their normal diet. For the exercise trials, the cyclists arrived at the laboratory after an overnight fast and consumed 42.5 grams of pistachios with water, or water alone, 30 min before and then 60 min into the time trial. Blood samples were collected before exercise, immediately after, 1.5 hours after and 21 hours after exercise and analysed for various markers of oxidative stress.

TAKE-HOME MESSAGE

This is the first study to show that a diet rich in pistachio nuts may compromise exercise performance. The first question that comes to mind is why? Why does the intake of this antioxidant-rich food increase oxidative stress and negatively impact on performance? The authors of the study suggest that the culprit is most likely a non-digestible carbohydrate found in pistachios called raffinose.

Raffinose is resistant to enzyme breakdown in the gastrointestinal tract and passes through into the large intestine where it is available for fermentation by bacteria. However, it is not yet clear whether raffinoseinduced changes to these bacteria are responsible for the increases in gastrointestinal permeability during exercise with pistachio consumption and this warrants further investigation.

Raffinose is not only found in pistachios but is also in various vegetables and legumes. Bacterial fermentation of raffinose is one of the main reasons why gas production in the gastrointestinal tract is elevated after meals rich in certain vegetables (baked beans, for example) and this results in increased flatulence.

Nevertheless, many raffinose-rich foods, including pistachios, are great sources of protein, fat, vitamins and minerals. So, keep eating raffinoserich foods, just cut back during periods of intense training or competition. And when you could do without the increased gas production. Mer

Nieman DC, Scherr J, Luo B, Meaney MP, Dréau D, Sha W, Dew DA, Henson DA, Pappan PA (2014) **Influence of** Pistachios on Performance and Exercise-Induced Inflammation, Oxidative Stress, Immune Dysfunction, and Metabolite Shifts in Cyclists: A Randomized, Crossover Trial. PLoS ONE 9(11): e113725.

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KEEP IT SIMPLE

New research reinforces the view that you shouldn't overcomplicate workouts By Matt Turner

GYM-GOERS EVERYWHERE

are always looking for ways to improve their training programme and maximise gains. Whether it's altering the order of a workout or shortening rest periods, they'll try anything if it'll give them an edge.

But a recent study suggests the best thing to do is keep it simple.

Research from Southampton Solent University suggests complicated training programmes don't necessarily produce better results than simpler, high intensity exercise.



The study, published in the journal of Applied Physiology, Nutrition, and Metabolism, investigated the value of preexhaust training and found the order of different exercises is of less relevance than simply performing the lifts at a high intensity and with correct form.

Pre-exhaust training is based on the principle that the targeted muscles can be pre-exhausted with isolation exercises immediately before a compound movement-thereby providing greater stimulation to the target muscles.

To test the theory, three groups of volunteers were given similar training plans consisting of upper-body, lower-body and core exercises in different orders, with either one- or two-minute rest intervals between sets. After 12 weeks, each plan produced a similar result.

Researchers therefore concluded that the order of exercises and length of rest periods have minimal to no added benefits.

"This study represents a real workout, by real people in a real gym, not a laboratory gym as in much strength training research," says James Fisher, lead author of the study. "Our results suggest that exercise order and rest interval make no difference to chronic strength increases following 12 weeks of training, but rather should be chosen based on personal preference." M&F

REFERENCE

Fisher, J., Carlson, L., Steele, J., and Smith, D., The Effects of Pre-exhaustion, Exercise Order, and Rest Intervals in a Full-body Resistance Training Intervention. Applied Physiology, Nutrition, and Metabolism,2014, 39(11): 1265-1270, 10.1139/ apnm-2014-0162

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EXPERT MUSCLE MOVEMENTS

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BACK

Top trainer Phil Learnev's

masterclass on anatomy and training for different body parts culminates with the back.

Photography by **Christopher Bailey**

The back features low on most people's lists of glamour muscles.

Chest and arms tend to be the eve-catching body parts that get most attention but a well developed back is key to a strong and balanced physique.

Bench presses and biceps curls might prepare you for the beach but they won't help you improve on some key big lifts, such as squats and deadlifts. A strong back will.

It also helps improve many other lifts and will even help bump up your bench press numbers.

To create a thick, muscular back vou need to know which individual muscles to hit and the movement patterns to target them.

BACK ANATOMY

The back is made up of a complex set of muscles running from the neck and shoulders to the lower spine. Knowing which muscles are responsible for which movements will help you target and train each one better.

The trapezius-or traps-are found at the back of the neck on top of the collarbone and shoulders and run down the middle of the back. The traps are responsible for moving the scapulas up and down as well as retracting them. They also help the shoulder blades rotate.

You use your traps in vertical pushing and vertical pulling movements, internal and external rotation as well as retraction so they're versatile muscles.

The **rhomboids** are located next to the middle portion of the traps and extend from the spine to the medial part of the shoulder blades. They are responsible for vertical pulling so vou can hit them with pulldowns or anything from high to low.

The **teres major** is tucked in behind the scapula. It is responsible for shoulder extension movements, such as dumbbell pullovers, internal rotation of the shoulder and shoulder adduction, which is vertical pulling (pulldowns or pull-ups).

The **teres minor** opposes the teres major. It is responsible for external rotation of the shoulder. You can work it with different types of rotations. It is also used in transverse extensions. such as face pulls, and transverse abduction, such as prone raises.

The **infraspinatus** is a thick triangular muscle covering the scapular which is part of the rotator cuff. It is used to externally rotate the shoulder and keep it stable. Besides external rotation, it is responsible for transverse adduction and abduction movements, such as lateral raises.

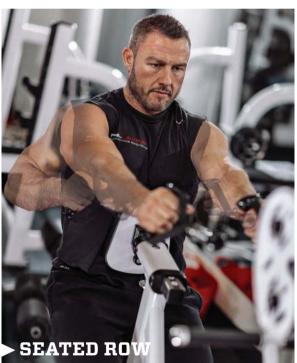
Finally, there are the latissimus dorsi. The lats are super-versatile as they're responsible for internal rotation, shoulder extension and shoulder adduction, such as vertical pulls. These large muscles are used for transverse extension (face pulls). scapula depression and scapula retraction, as required with any vertical pulling movements in the gym.





EXPERT MUSCLE MOVEMENTS





MUSCLE MOVEMENTS

Knowing which muscles make up the back and how they work will help you train smarter. But there are key mistakes that people often make when training these muscles. However, a few small tweaks could make a big difference.

One thing I often see is people using their arms to shift weight rather than recruiting the back

muscles. Pulldowns are a good example: some rely too much on their arms to lower the weight.

To avoid this, depress the scapulas and retract the shoulders. This will bring the back into the movement more.

A lot of people do seated rows with their arms and don't engage their backs properly, so before beginning every movement of this exercise ensure vour shoulders are retracted slightly.

The bottom line is: if you want to hit

your back, retract your shoulders on all horizontal movements like rows but depress the shoulders on vertical pulls. This will take the arms more out of the equation.

Also, don't be afraid to use straps when lifting-it will take stress off your biceps and forearms. This little tip could benefit a lot of lifters because you often find your grip goes before your back.

TRY THIS WORKOUT

Vertical Pull 4 sets x 8-10 reps Arc Row 3 sets x 15 reps Dip Shrug 3 sets x 10-12 reps Seated Row 2 sets x 15 reps

Vertical Pull I prefer a supinated grip (palms facing up towards you) or semi-supinated grip (palms facing towards each other) rather than a pronated grip (palms facing down) when doing this movement. This is because a pronated grip tends to internally rotate the hands, which stresses the anterior head of the shoulders. externally rotates the scapulas and encourages scapula elevationwhich you don't want.

I encourage people to avoid anything that involves internally rotating their hands, particularly on pulls or back exercises, as this is a common postural flaw.

Arc Row Lie face down on an incline bench, start with the arms in front of the shoulders and bring them up towards the hips in an arcing movement with the elbows facing the ceiling.

It is a horizontal row but the arc positioning encourages thoracic extension. This is good because a lot of people have thoracic rounding (flexion).

Dip Shrug Go into the dip position with arms straight and dip without bending the arms. This works on scapula depression, which is a weakness in many people. People are often good at pulling the scapula up and out but not down.

Seated Row This movement should be done with the shoulders retracted and slightly depressed. M&F

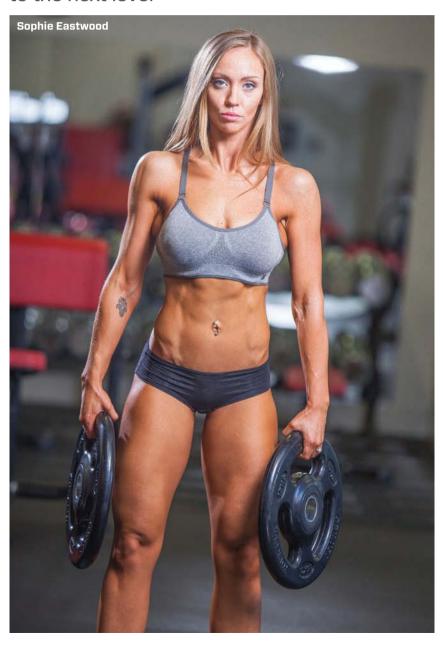
PHIL LEARNEY

is a respected strength and conditioning expert with 20 years experience. He is a coach, writer and speaker with an open-minded, results-based approach. He is the director of Phil Learney Performance Education and teaches extensively across the UK



KEEPING THE BODY GUESSING

MICHELLE BRANNAN reveals how she helped Sophie Eastwood take her physique to the next level



THE CLIENT

Sophie Eastwood is an experienced personal trainer who understands nutrition and how to train using a variety of different techniques.

In 2013 she came to me with a view to getting ready for a bikini contest. Sophie knew how to train others for weight loss and specific goals but, as is often the case, when it came to herself she thought it would be useful to have a second opinion.

The challenge was to transform an already fit physique into a competitor. Her athletic background gave her a head start in some ways but the challenge was to keep seeing improvements. We needed to keep doing different things to prevent her body from adapting.

MY DIAGNOSIS: NUTRITION

The adaptation theory is a major factor in nutrition. The first time someone cleans up their diet their body tends to respond quickly but over time it adapts.

The body tries to conserve energy so if you regularly follow a low calorie diet your metabolic processes slow down to accommodate a lower level of energy input. When this happens, most people eat even less food and this causes their metabolic processes to slow even further. Before they know it, they are on a very low calorie diet yet their body is holding onto fat and becoming starved of the vital vitamins and minerals it needs to function. It's a lose-lose situation. People who have been "dieting" for a sustained period of time often reach this point.

Instead of reducing calories beyond a certain level, the key is to keep the body guessing, so throughout Sophie's contest preparations we kept changing her diet to avoid adaptation occurring.

For a short period of time her body responded well to a high carbohydrate, low fat diet and when her metabolism started to adapt we changed to high fat and low

EXPERT BIKINI BODY

carbohydrate, keeping the calories and protein levels roughly the same throughout. We factored in "off plan" meals once a week, which changed to "refeeds" closer to competition. A refeed is a carbohydrate-rich meal designed to restore muscle glycogen. Using this method, Sophie kept dropping body fat and didn't slow her metabolism right down.

MY DIAGNOSIS: TRAINING

Weight training for aesthetics was the main focus of Sophie's workout programme. She followed a split body part routine five to six days a week.

We wanted to develop symmetry and balance throughout her body so we worked on creating more shoulder cap, and tightening up and shaping her legs and glutes.

Each day Sophie's training was slightly different and each week we changed the sets and repetition ranges to avoid adaptation. She did an average of 60 minutes cardio each day during contest preparation but again we did not stick to the same cardio day in, day out.

I always encourage doing different types of cardio to shock the body and prevent it from getting used to what it's doing, rather than simply doing the same thing for longer. Many people do add more and more minutes to maintain fat loss but where does this end? I am not anti cardio at all but I do believe it is sometimes better to do something different or up the intensity rather than just keep going for longer-maximise the time spent rather than spending more time.

Here's a typical weekly weights and cardio routine that Sophie followed.

Day 1

Resistance training: legs Steady-state low impact cardio on elliptical machine

Day 2

Resistance training: shoulders **HIIT Sprints**



Day 3

Resistance training: glutes and hamstringsInterval training on an incline cross ramp using resistance and incline for variation

Day 4

Resistance training: back and chest Steady-state running

Day 5

Resistance training: glutes, hamstrings and shoulders Plyometric circuit

Interval training on an incline cross ramp using resistance and incline for variation

Day 7

Rest and recovery

THE RESULT

Sophie won her first bikini fitness contest in Leeds in 2013 to qualify for the British Championships. In 2014 we continued to work on Sophie's physique and she again won the Leeds qualifier and then placed fourth at the British Championships in the tall bikini fitness class. Each year she brings a more streamlined, balanced physique with greater muscle tone. She got married at the end of last year and is now planning to compete at the UK Nationals in April and at the Arnold Classic Europe in Spain in September. Mes

ABOUT MICHELLE

Michelle Brannan is an IFBB bikini pro. She also runs a coaching team called Showgirl Fitness and the online training subscription resource BodySculpt Pro www.michellebrannan.com



IMON HOWARD

DOUBLE KETTLEBELL FRONT SQUAT

The ultimate move for building strength, muscular legs, and a powerful core

By Andy Bolton Photography by Christopher Bailey

ONE OF THE BEAUTIES OF KETTLEBELL TRAINING is that it allows you to work your muscles really hard, without stressing your ioints as hard as barbell exercises can. This means you can train with fairly light weights on kettlebell exercises and still lift far heavier on the barbell equivalent.

A friend of mine trained two months solid using just a pair of 24 kg kettlebells on the double kettlebell front squat. After eight weeks he tried front squatting a barbell. Despite not having performed the movement for several months, he found he could still put up 120 kg for three reps.

That's a pretty neat carryover, I'm sure you'll agree. A pair of kettlebells totalling just 48 kg maintained a 120 kg triple on the barbell front squat.

That's because the double kettlebell front squat gets you squatting very deep-many people find they can truly squat hams to calves this way-and works your core like nothing else.

Indeed, if you want a six-pack to rival a Greek god, ditch the crunches and just start eating clean and doing the double kettlebell front squat twice a week. You'll be amazed at the results.

Of course, before you can squat a pair of kettlebells you have to clean them to the rack position. I'll tell you how to do that right now and then show you how to programme this killer move into your training sessions.



PERFECTING THE TECHNIQUE START POSITION:

- Place the 'bells on the floor so that they form an inverted "V". The 'bells should be an inch apart.
- Stand a few inches behind the 'bells with your feet wide enough apart to ensure the 'bells don't hit your knees as you swing them between your legs. Make sure your

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EXPERT KETTLEBELL MASTERCLASS

toes are only slightly flared out, or better still, point them forwards if your hip mobility allows.

- Put your hands into the crease of vour hips and push your hips backwards. Look straight ahead and grip the 'bells.
- Keeping a neutral spine, brace your abs, tense your lats and grip the 'bells hard. Your shoulders should be packed and your hamstrings should feel tight and "loaded".
- Sniff in through your nose and hike the 'bells back between your legs. Keep your arms straight.
- Snap your hips forwards, being sure to keep your abs braced, lats tensed and shoulders packed. Catch the 'bells in the rack position, and then bring your stance in so it's about shoulder width. You're now ready to squat.

THE SQUAT:

- Breathe in through your nose, drive your heels into the floor, tense your quads, clench your butt, brace your abs and crush grip the 'bells. Feel pure tension flowing through your body from head to toe.
- Do not try to sit back into the squat like a powerlifter. If you do, you'll drop the 'bells forwards. Remember: this is a front squat, so some forward shift of the shins on the descent is not only acceptable. it's desirable. Descend while trying to stay as upright as possible. If you've followed the tightness cues in the previous point you'll do this naturally.
- When you're in the hole, pause for a second and stay tight.

THE ASCENT:

- Drive up (not forwards) as hard as you can. Look straight ahead or slightly upwards.
- Be sure to keep your abs and lats tensed hard and your grip crushing the 'bells as hard as you can. Hold vour breath or breathe out-while staying tight-at the sticking point.
- Once you are in the finish/start position, sniff in some more air, get tight and descend into another rep.



PROGRAMME YOUR WORKOUT

This is fairly straightforward. You can't go wrong with 3-5 sets of 3-5 reps. Rest for 2-5 minutes between sets-as long as you need to recover.

Work up to 5 x 5 with a given weight, then you have a choice to make: progress to heavier 'bells or work up to 8-10 sets of 5 with the same weight. The benefit of this approach is that when you do progress to heavier kettlebells, that pair will feel much lighter than if you'd made the switch earlier.

You can perform this double front squat as a primary strength-building exercise or an assistance exercise. There is no right or wrong.

If muscle building is your goal you'll be amazed at how fast this movement can "blow up" your legs. Feel free to increase the reps to 8-10 per set, so long as you maintain great form.

Squatting a pair of 24s is entirely respectable. A pair of 32s is pretty strong. And the double 48s? Well, that's a serious goal. Mer

ANDY BOLTON is a multiple world champion powerlifter and world record holder. He was the first man to deadlift more than 1,000 lbs. For more information visit andyboltonstrength.org

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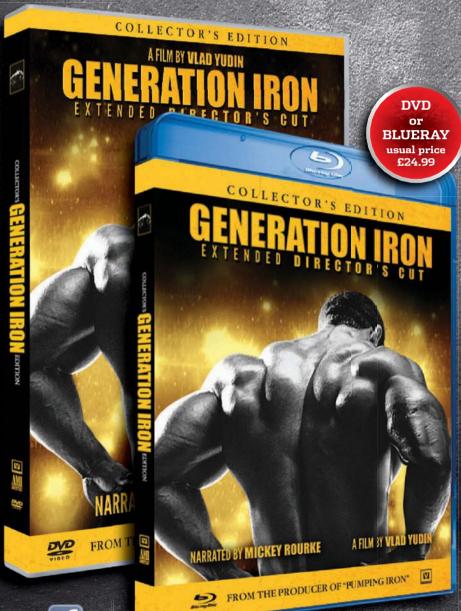
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